REPORT RESUMES

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SELECTED VICARIOUS EXPERIENCES VERSUS DIRECT OBSERVATIONAL EXPERIENCES OF PRE-SERVICE TEACHERS IN THE FOUNDATION AREAS OF PROFESSIONAL PREPARATION AT THE UNIVERSITY OF OKLAHOMA.

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THIS IS AN INVESTIGATION OF THE EFFECTIVENESS OF TWO PROCEDURES FOR TEACHING THE CONCEPTS IN THREE REQUIRED COURSES IN THE PROFESSIONAL PREPARATION OF TEACHERS. THE USE OF SPECIALLY PREPARED AUDIOVISUAL MATERIALS WAS COMPARED WITH DIRECT OBSERVATION. STUDENTS WERE RANDOMLY ASSIGNED TO TWO SECTIONS DESIGNATED AS VICARIOUS OBSERVATION GROUPS AND TWO SECTIONS DESIGNATED AS DIRECT OBSERVATION GROUPS. THE DIRECT OBSERVATION GROUPS MADE NINE 30-MINUTE OBSERVATIONS OF CLASSROOM AND SCHOOL-COMMUNITY SITUATIONS. THE VICARIOUS OBSERVATION GROUPS VIEWED NINE 30-MINUTE FILM AND SLIDE SEQUENCES. THE AUTHORS CONCLUDED THAT ONE METHOD WAS AS EFFECTIVE AS THE OTHER IN REACHING THE STATED OBJECTIVES OF THE COURSES. (JK)

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192

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Report of Research Project

Funded By

New Educational Media Branch
United States Office of Education
Department of Health, Education and Welfare

By

Principal Investigators
W. R. Fulton, Professor of Education, University of Oklahoma
O. J. Rupiper, Associate Professor of Education, University of Oklahoma

College of Education
In Cooperation with the Research Institute
University of Oklahoma
Norman, Oklahoma

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Foreward

The program of research herein reported was supported by the Educational Media Branch, United States Office of Education, Department of Health, Education, and Welfare under grant 734031.00.10.21 awarded under Title VII of the National Defense Education Act of 1958 (P.L. 85-864) to the University of Oklahoma.

This research was conducted not only within the framework of the teacher education program in the College of Education, but also within the context of the three professional education courses required of all pre-service teachers before they enter student-teaching experience.

The study was conducted by W. R. Fulton and O. J. Rupiper. Research assistants who participated in the project from inception to completion including the writing of this report were: Mervel Lunn, Harold Hunnicutt, Billie Fancher, and Phillip Duff.

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CONTENTS

PAGE

I. INTRODUCTION 1

Purpose of the Study 1

Background of the Study 2

Need for the Study 3

Statement of the Problem 5

II. SELECTION AND PRODUCTION OF MATERIALS 8

Development of Observational Goals 8

Evaluative Instruments 10

Selection and Evaluation of "Film Sequences" 20

Production of "Film and Slide Sequences" 25

Relating "Film Sequences to Observational Goals" 26

III. RESEARCH DESIGN AND COLLECTION OF DATA 31

Sampling Procedure 31

Experimentation 32

Collection of Data 33

IV. ANALYSIS OF DATA AND CONCLUSIONS 35

Analysis of Data 36

Findings and Conclusions 46

V. SUMMARY AND RECOMMENDATIONS 49

Conclusions and Implications 52

Recommendations 53

VI. APPENDIXES 55

LIST OF TABLES

Table		PAGE
1	Unit Titles, Objectives and Concepts with Suggested Illustrations; Education 52--The School in American Culture..	11
2	Unit Titles, Objectives and Concepts with Suggested Illustrations; Education 151--Human Growth and Development....................................	12
3	Unit Titles, Objectives and Concepts with Suggested Illustrations; Education 222--Educational Evaluation and Guidance....................................	14
4	Unit Titles, Objectives and Observational Goals; Education 52--The School in American Culture........	15
5	Unit Titles, Objectives and Observational Goals; Education 151--Human Growth and Development.........	16
6	Unit Titles, Objectives and Observational Goals; Education 222--Educational Evaluation and Guidance..	17
7	Unit Titles, Objectives and Titles of Films from Which Film Sequences Were Obtained; Education 52--The School in American Culture......................	22
8	Unit Titles, Objectives and Titles of Films from which Film Sequences Were Obtained; Education 151--Human Growth and Development........................	23
9	Unit Titles, Objectives and Titles of Films from which Film Sequences were Obtained; Education 222--Education Evaluation and Guidance...................	24
10	Unit Numbers, Objectives, Observation Numbers, Titles of Film Sequences and Footage of each Film Sequence; Education 52--The School in American Culture.........	27
11	Unit Numbers, Objectives, Observation Numbers, Titles of Film Sequences and Footage of each Film Sequence; Education 151--Human Growth and Development..........	28
12	Unit Numbers, Objectives, Observation Numbers, Titles of Film Sequences and Footage of each Film Sequence; Education 222--Educational Evaluation and Guidance...	29

LIST OF TABLES (Continued)

Table		Page
13	Matrix of Intercorrelations between Criterion and Predictor Variables; Education 52--The School in American Culture	37
14	Matrix of Intercorrelations between Criterion and Predictor Variables; Education 151--Human Growth and Development	38
15	Matrix of Intercorrelations between Criterion and Predictor Variables; Education 222--Educational Evaluation and Guidance	39
16	Coefficient of Partial Correlation	40
17	Summary of Analysis of Covariance; Education 52--The School in American Culture	43
18	Summary of Analysis of Covariance; Education 151--Human Growth and Development	44
19	Summary of Analysis of Covariance; Education 222--Educational Evaluation and Guidance	45

INTRODUCTION

Most teacher-education institutions either encourage or require students to do some observation of schools, classrooms, and pupil behavior in conjunction with their enrollment in professional courses prior to student teaching. Usually, there are not enough accessible schools nor classrooms with sufficient space and facilities to accommodate the number of students enrolled in these professional courses. Such problems create considerable difficulty for most teacher-education institutions. However, the problem would be less serious if the students could be oriented to various educational situations through means other than direct observations. Because of the apparent importance most teacher-education institutions attach to direct observational experiences, and because of the problems frequently encountered in arranging and conducting these observations, it would be valuable to know whether vicarious observational experiences would be as effective. Since so little information was available with respect to observational experiences for pre-service teachers, the present study was undertaken.

Purpose of the Study

The purpose of this study was to determine whether another method of providing observational experiences for pre-service teachers during their professional training prior to student teaching would be as effective and more feasible than direct classroom observation. More specifically, would the viewing of "film and slide sequences" which depict educational principles be as effective as direct classroom observational experiences of similar situations?

Background of the Study

The study was conducted within the academic framework of the College of Education at the University of Oklahoma. The central function of the College rests in the preparation of qualified public school teachers. All students enrolled in the College are required to complete three sequential professional education courses as a prerequisite for enrollment in student teaching. These three courses are described as follows:

> Education 52--The School in American Culture. Units of Study: development of public education in the United States; relationships of schools to the culture and influences of schools in the processes of cultural change; influence of cultural changes on schools and their curricula; and attitudes of various groups in American society toward public schools and their purposes in terms of democratic ideals.
>
> Education 151--Human Growth and Development. Units of Study: sources and methods of gathering data; physical growth; intellectual development; social and emotional development; and introduction to learning.
>
> Education 222-- Educational Evaluation and Guidance. *Units of* Study: characteristics of effective evaluation and guidance; the classroom teacher's use of the materials and techniques of evaluation and guidance in the improvement of teaching and learning processes and familiarization with standardized tests and preparation of teacher-made tests.[1]

The successful completion of these courses and an understanding of the concomitant concepts are assumed to make student teaching more meaningful. Each course schedule requires that the student be exposed to three hours per week of lectures and discussions and one hour per week to observations of educational situations involving children and community settings. These observations were to be made at the University School and other suitable locations.

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[1] Bulletin of the University of Oklahoma, Issue for the College of Education, New Series No. 1308 (Norman: University of Oklahoma Press, November 8, 1960), p. 50.

The University School, commonly referred to as a laboratory school in some institutions, is an integral part of the College of Education and is located approximately three miles from the main campus. Although the organization of the University School includes kindergarten through the twelfth grade, and one of its purposes is to provide opportunity for laboratory experiences in the form of observations for students in teacher-education programs, its distance from the main university campus makes it difficult to use the school for observational purposes.

Need for the Study

It is generally agreed that learning of concepts is facilitated when subject matter relating to principles is accompanied by observation of situations directly related to those concepts. Theoretically, the University School should provide such an observational setting for effective learning of teacher-education concepts. However, the limited size of the classrooms, the transportation problems for college students, and the scheduling problems make its extensive use for observations impractical. Also, it is not possible to be assured that a desired situation will actually exist in a class session at the precise time of an observation. Another limitation of the University School is the possibility of many extraneous activities occurring during a class session which have no relationship to the special purpose of the observation. Furthermore, a performance or situation which at times seems highly desirable to repeat cannot be replicated for direct observation. Obviously, these limitations are not peculiar to the University School, but may be found in most formal classrooms.

Although considerable research relating to film utilization has been directed toward regular classroom instruction, only scant attention has been given to the use of films or other media in observational practices prior to student teaching. Only one such study was found by the investigators, and it was extremely limited in scope. The study involved the efforts of personnel in three institutions of higher education in Georgia in an attempt to improve elementary education in that state by having prospective teachers view projected slides. The slides dipicted activities in which students would likely be engaged during their student teaching.[2] The importance of improving observational practices was indicated in a report by a sub-committee of the Standards and Survey Committee of the American Association of Teachers Colleges. This report dealt with experiences prior to student-teaching and called attention to the need for laboratory experiences which would meet the needs of the individual students and give meaning to concepts being developed in college classes.[3]

On the basis of information from research relating to the use of audio-visual materials in learning, the following speculations were advanced: (1) that observational experiences of pre-service teachers in professional education at the University of Oklahoma would be as effective when done vicariously as when done directly; (2) that limitations involved in direct observation would be alleviated by using short film sequences and other audio-visual media which depict adequately the situation needed in connection with a particular topic; (3) that filmstrips, slides, and sound motion pictures would be suitable media for presenting vacarious experiences; and (4) that when such materials were used in clusters relating to specific purposes at the exact time needed, they would make the uninterrupted viewing more meaningful. Other variations could be developed, but these represent the characteristic speculations which were subsequently translated into specific hypotheses used in this study.

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[2] Ben A. Bohnhorst, et al. Some Promising Practices In Improving the Education of Teachers (Athens: University of Georgia, 1957).

[3] American Association of Colleges for Teacher Education, School and Community Experiences in Teacher Education, A Report of the Sub-Committee of the Standards and Survey Committee (Oneonta, New York: American Association of Colleges for Teacher Education, 1948).

Statement of the Problem

The primary problem to which this study was directed was whether an understanding of the educational concepts in the sequential foundation courses offered by the College of Education at the University of Oklahoma could be attained as well by the use of specifically prepared audio-visual materials as through direct observational experiences at the University School. Specifically, the problem was to compare the relative effectiveness of the two methods of observing educational facilities, behavioral situations, and developmental patterns which were emphasized in the three basic courses in professional education required in the College of Education program: (1) Education 52 -- The School in American Culture, (2) Education 151 -- Human Growth and Development, and (3) Education 222 -- Educational Evaluation and Guidance.

Of necessity, the method of empirical study involved the assembling, production, and testing of suitable audio-visual materials in relation to selected concepts of the three sequential professional education courses. The principal criterion by which these concepts were identified was the potential contribution to an understanding of the concepts which might be derived through observing educational situations depicted in audio-visual materials such as film and slide sequences.

The experimental phase of the study was structured to test the general null hypothesis that there are no statistically significant differences between achievement of understanding of conceptual principles among students who observe selected vicarious materials such as "film and slide sequences" which depict educational situations and those students who directly observe educational situations. The data used in testing this hypothesis was obtained from the administration of an achievement test which consisted primarily of items which reflected an understanding of concepts by students enrolled in the sequential professional education courses at the University of Oklahoma. Three specific null hypotheses were formulated:

1. There is no statistically significant difference between mean achievement as indicated by test scores obtained through the measurement of understanding of concepts by students enrolled in Education 52 at the University of Oklahoma who participated in selected vicarious observational experiences and those who participated in direct observational experiences.

2. There is no statistically significant difference between mean achievement as indicated by test scores obtained through the measurement of understanding of concepts by students enrolled in Education 151 at the University of Oklahoma who participated in selected vicarious observational experiences and those who participated in direct observational experiences.

3. There is no statistically significant difference between mean achievement as indicated by test scores obtained through the measurement of understanding of concepts by students enrolled in Education 222 at the University of Oklahoma who participated in selected vicarious observation-

al experiences and those who participated in direct observational experiences.

The study was developed in three principal phases. The procedures for conducting the study relative to each of the phases and the procedures for testing the hypotheses were as follows:

1. Selection and Production of Materials which included the develment and tabulation of a set of observational goals involving specific concepts unique to each professional education course; selection and evaluation of "film and slide sequences" from educational films which were related to the predetermined concepts; and production of necessary "film and slide sequences" which were not available from current educational films.

2. Experimentation which included the development of an achievement test for each of the professional education courses for the purpose of measuring understanding of concepts; administration of the achievement test and selected standardized tests to the participating groups at the onset; administration of the same achievement test at the close of the experimental phase of the study; and the preparation and analysis of the test scores which involved the transformation of raw scores to standard scores, computation of multiple regression equations, determination of composite scores, and analysis of covariance of the scores for each professional education course.

3. Analysis and Interpretation of the results and the drawing of conclusions therefrom.

SELECTION AND PRODUCTION OF MATERIALS

This section presents a description of the first phase of the study which involved three major steps: (1) the development of observational goals based on selected concepts and objectives for each unit of each course; (2) the selection of standardized tests and construction of achievement tests designed to measure understanding of concepts; and (3) the selection and evaluation of film sequences from currently available films and the production of slides, filmstrips and film sequences relating to the concepts and observational goals.

Development of Observational Goals

In order to provide uniform directions to all students participating in the study, a set of observational goals was prepared. These goals were intended to provide uniform directions in making observations. The general subject-matter content for the courses, The School in American Culture, Human Growth and Development, and Educational Evaluation and Guidance was broadly divided into divisions, called units. Each instructor was expected to structure his teaching within the framework of these units.

Selecting Concepts and Objectives

Since a detailed, identifiable body of content common to all sections of each course was lacking, it was necessary to formulate a list of conceptual principles which represented understandings of primary importance for the student upon which the development of observational goals could be based. Obviously, isolating such principles from the complex body of content covered in the regular courses would be extremely difficult.

Consequently, the principles developed by the investigators and reported herein are admittedly subject to question but are considered to be adequate for the purpose of this study. These principles will hereafter be referred to as concepts.

The development of the original list of concepts required a content analysis of subject matter for each course to identify those particular concepts relevant to the specific course. The sources used in making the analysis consisted of basic textbooks, references and outside readings, and lecture notes of instructors. Apart from the use of printed materials, group conferences and individual, informal discussions were held with each faculty member responsible for teaching one or more of the courses. A comprehensive, temporary list of concepts was formulated as a result of these analyses and discussions.

Each concept was typed on an individual card to facilitate the ranking of concepts by faculty members. Each participating faculty member judged the accuracy of the statement of each concept, and also ranked the concepts in order of importance. From this co-operative effort the following number of concepts was obtained for each course: 22 in The School in American Culture, 26 in Human Growth and Development, and 22 in Educational Evaluation and Guidance.

As it proved impractical to arrange separate observations for each concept, it was necessary to group the concepts into clusters relating to a general objective which more nearly represented principles depicted in a cluster of concepts. Since there were no identifiable objectives common to all sections of each course, a statement of an objective was formulated for each unit in each of the three courses. This was accomplished in much the same manner as was the formulation of the statemant of concepts. It was then possible to group the concepts into clusters which were pertinent to each objective.

In order to complete the development of the observational goals and to prepare for the selection of sequences, a list of suggested illustrative situations was made. The criteria used in identifying the separate illustrative situations were: (1) their relevance to the unit objectives and clustered concepts; and (2) their suitability for vicarious and direct observations. This list of feasible and suitable illustrations, accompanied by the unit objectives and clustered concepts, is shown in Tables 1, 2, and 3.

On the basis of the data indicated in Tables 1, 2, and 3, a tentative list of observational goals was prepared. Again, the faculty members who were responsible for selecting and evaluating the objectives and concepts evaluated the tentative list of observational goals and made constructive revisions. From these revisions, a final list of observational goals was prepared. Each participating student was given a copy of the goals as a guide for locating educational situations pertinent to the purpose of his observations. A complete list of the goals showing their relationship to unit objectives is shown in Tables 4, 5, and 6.

Evaluative Instruments

Selection of Standardized Instruments

For the purpose of assessing the influence of various factors on academic achievement in the professional education courses, as well as to know the differences between ability, aptitude, attitude, and social class identification of the students who participated in this study, suitable evaluative instruments were selected. In selecting such instruments, the

TABLE 1.—UNIT TITLES, OBJECTIVES AND CONCEPTS WITH SUGGESTED ILLUSTRATIONS, EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE

UNIT I. THE ROLE OF EDUCATION IN THE AMERICAN CULTURE

Objective: To understand the nature of the American culture and the role of the individual and the school in cultural and social change.

A. A basic purpose of public schools is to develop through democratic methods persons committed to the spirit and tenets of democracy.

To illustrate the use of democratic methods in the classroom.
To illustrate the use of democratic methods in student activities.
To illustrate the use of democratic methods in public meetings.
To illustrate the use of group discussion methods in faculty meetings.

B. One of the school's basic functions is to perpetuate those cultural elements having the greatest promise of contributing to human advancement.

To illustrate that cultures are different.
To illustrate how patterns of culture are formed.
To illustrate the role society plays in determining the culture.
To illustrate how the culture is perpetuated by imitation and direct teaching by the school.

C. A general purpose of education is to develop clear and rational minds to direct and carry out the tasks of contemporary living.

To illustrate the steps in problem solving.
To illustrate learning is not memorizing facts.
To illustrate the correlation between problem solving and the tasks of contemporary living.

D. Fundamental loyalities of the teaching profession require a commitment to the democratic traditions, a concern for the growth and development of children, and a devotion to the spirit and methods of scholarship.

To illustrate that a teacher is a good citizen.
To illustrate that a good teacher is concerned with the mental, physical, social, and moral growth and development of each child.
To illustrate that a teacher is well educated and continuously improving self.

E. The school is a part of the community and affects the community which in turn affects the school; since the individual is a part of the community, he is also a part of the school in the community.

To illustrate the community's responsibility to the school and the school's responsibility to the community.
To illustrate the parents', students', teachers', and all other persons' responsibilities to both the school and the community.
To illustrate that schools are good business for the community.

F. The school was established to educate immature members of society and is reinforced by other agencies in the country.

To illustrate the school's historical place in educating youth.
To illustrate growth in social relationship of students in school.
To illustrate the areas where other agencies of the community are responsible alone or with the school.

UNIT II. THE CHANGING COMMUNITY AND EDUCATION IN AMERICA

Objective: To understand the effects of the changing community organization and life on education and the school as a social institution.

A. Transition is usually accompanied by change in value systems, attitudes, and patterns of behavior; the public must assume responsibility to resolve problems by study, debate, and discussion.

To illustrate changes in value systems, attitudes, and patterns of behavior in students.
To illustrate the public at work to improve their schools.
To illustrate the need to involve the community.

B. Education is the process designed to modify the behavior of individuals.

To illustrate how schools change an individual's behavior.

C. The significance of transition is that many beliefs and ideas about society were formed in conditions of living that no longer exist; the schools must train youth to participate in a changing society; therefore, the educational system must continually change its goals and policies.

To illustrate ways society is changing.
To illustrate ways that schools and individuals must change.

D. Educators can assume leadership in educational change only if they have an understanding of the social foundations of education.

To illustrate the increase in social knowledge.
To illustrate how social knowledge can affect methods.
To illustrate the tremendous knowledge teachers need in history and philosophy of education.

E. In a transitional period, educators are forced by events and increased knowledge of man and society to revise the theory and practice of pedagogical methods and to strive to improve society.

To illustrate the events and increased knowledge of man and society that have caused a revision of the theory and practice of pedagogical methods.
To illustrate that this demand for change is continuous.

UNIT III. SOCIAL STRATIFICATION IN AMERICAN SOCIETY AND ITS REFLECTION IN EDUCATION

Objective: To understand the role and effects of the changing American family, organized pressure groups, and social class on the school and its program.

A. Educators should have knowledge of social class stratification and an understanding of class behavior, attitudes, and goals in order to help the individual acquire new status or learn to play the role expected of him by society.

To illustrate problems and their underlying causes within the class system to point this need.

B. Classes are distinguished by wealth, occupation, education, religion, national origins, lineage, community activities, place and type of residence and physiological characteristics.

To illustrate by chart the distribution of wealth.
To illustrate by chart the relationships of education to welfare.
To illustrate place and type of residence.
To illustrate different physiological characteristics.

C. The difference between a class and a caste system is a matter of degrees: the class system is more flexible and open to change.

To illustrate a class and a caste system.
To illustrate the differences in a caste and a class system.
To illustrate the role of education in the mobility of the class system.

D. Students and teachers, depending upon their status within the community, are affected by the school's organization, folkways, mores, and traditions.

To illustrate the school as a community and its effect on a student.
To illustrate the need of orientation of students.
To illustrate the student's part in the community.

E. Ethnic groups, those of different racial or national origin, approach a caste system in the United States; economic, educational, and social disabilities tend to keep them in lower classes.

To illustrate that boundaries between racial groups is a mere line.
To illustrate difficulties of rising above one's environment.

UNIT IV. WELFARE LEVELS, EDUCATIONAL OPPORTUNITY, AND THE SCHOOL PROGRAM

Objective: To understand the relationship of various economic levels to attitudes toward education, curriculum selection, and other major problems in education.

A. A major principle of American education is equality of educational opportunity which means that every child has an equal chance despite environment; however, full achievement is affected by social, economic, and political factors.

To illustrate that free schools are available.
To illustrate the increase of attendance in higher socio-economic areas.
To illustrate problems of mass education.
To illustrate economic influences.
To illustrate social influences.
To illustrate political influences.

B. The conception of the social role of the school will influence the curriculum, atmosphere, discipline, and activities.

To illustrate differences between comprehensive and specialized schools.
To illustrate normal activities of democratic schools.

C. A friendly and cooperative atmosphere in the classroom is essential in studying social problems in a critical and objective way; the teacher should not impose views on pupils or assume a laissez-faire attitude but should develop mental discipline in problem solving.

To illustrate responsibility of teachers to teach problem solving.
To illustrate contrasting methods and their effect on problem solving.

D. The middle class orientation of schools is not adapted to the interests and needs of lower class pupils.

To illustrate how curriculum does not fit needs.
To illustrate attitudes of parents in different classes.
To illustrate the after school and weekend activities of students in different classes.

E. The social environment created by poverty is reflected in attitudes toward education and has a detrimental effect on mental health and the personality of the growing child.

To illustrate how students from poverty areas are not interested in school.
To illustrate how students of lower socio-economic classes have antisocial attitudes.

F. The environmental conditions of lower class culture are not conducive for stimulating a desire for an education.

To illustrate the lack of reading materials in homes.
To illustrate the lack of a place to study.
To illustrate why they drop out.

TABLE 2.—UNIT TITLES, OBJECTIVES, AND CONCEPTS WITH SUGGESTED ILLUSTRATIONS, EDUCATION 151—HUMAN GROWTH AND DEVELOPMENT

UNIT I. GENERAL PRINCIPLES OF HUMAN GROWTH AND DEVELOPMENT

Objective: To understand the nature of growth and development of children.

A. Instruments to measure child growth and development are questionnaires, standardized tests, case histories, projective techniques and rating scales.

To illustrate use of questionnaries with pre-school children, parents, and teachers.
To illustrate the use of intelligence, aptitude, achievement, personality, and attitude tests in public schools.
To illustrate the use of medical, social, and school histories.
To illustrate the use of play situations and materials, such as, doll play, finger painting, balloons, ink blots, and pictures.
To illustrate use of self-rating and evaluation.
To illustrate evaluation by experts.

B. Four general methods of studying growth and development are naturalistic observation, clinical procedures, experimental techniques, and statistical methods.

To illustrate observational methods, such as, direct viewing, one way screen, and biography.
To illustrate the use of biographical and anecdotal methods, interviews, and questionnaires as forms of naturalistic observation.
To illustrate the use of team approach in clinical procedures by competent workers.
To illustrate experimental techniques, such as, the one-group procedure, the parallel-group procedure, the rotation technique, and the co-twin control method.

C. Each child is uniquely different physically, chemically, functionally, and psychologically; his growth and development are the product of interaction between inherited biological composition and environment.

To illustrate that the process of growth is complex.
To illustrate that the process of physical growth is interrelated.
To illustrate that the development process is first general, gradually becoming specific because of expansion and specialization.
To illustrate that the order of development follows a common pattern or cycle, but the rate varies.
To illustrate the tendency toward positive correlation in growth of different areas of development.
To illustrate that growth tends to be continuous, not uniform, but fluctuates in rate during different stages in the growth cycle.
To illustrate the influence of sex differences.

UNIT II. PHYSICAL GROWTH AND DEVELOPMENT

Objective: To understand the progressive stages of physical growth and the school's part in providing an educational program for physical development.

A. Conception is the fusion of the male reproductive cell, the sperm, with a female reproductive cell, the ovum; biological structure and potentials for growth are determined by the genes an individual receives through mechanisms of heredity.

To illustrate the process of human reproduction.
To illustrate meaning of menstruation.
To illustrate when conception occurs each individual receives 48 chromosomes: 24 from each parent who contributes one half of their 48 chromosomes whose selection is merely a matter of chance.
To illustrate that the chromosomes contain between 20,000 and 40,000 genes which are the real carriers of hereditary characteristics.
To illustrate that sex is determined at conception by arrangement of the male chromosomes, that is, if the sperm bears a small y sex chromosome, the child will be a boy.
To illustrate the cause of twins and multiple births.
To illustrate meaning of dominant and recessive genes.
To illustrate how congenital infection is not inherited and it is possible to cure it by proper treatment.

B. Knowledge of pre-natal life and development is basic to a knowledge and understanding of the later life of an individual.

To illustrate that the prenatal period lasts 280 days with three stages of development, the germinal, the embryonic and fetal, and the basic structure and function of each stage.
To illustrate that many hazards exist before birth.
To illustrate that fetal behavior consists of two broad types of reaction, generalized movements involving most of the body and specific reflexes confined to limited areas.
To illustrate that birth is a severe ordeal for a baby, requiring ten days to a month to adjust to the new environment.
To illustrate that behavior in the neonate is a continuation of the kind of activity that occurred in the last part of the fetal stage, sleeping a great deal, but with the maturing and development of the nervous system reaction gradually increasing.
To illustrate the importance of pre-natal environment in relation to development and mal-development, such as, physical condition of mother and mother's relation to fetus.
To illustrate which diseases contracted by the mother during or before pregnancy are dangerous to the new born baby.

C. Characteristics of human infancy that teachers need to know are relative helplessness, need for relatively long periods of sleep, coordination and motor skill development, growth trends and patterns, and patterns of locomotion.

To illustrate the effects of deprivation, such as, malnutrition, lack of affection and love, and lack of stimulation at crucial growth periods.
To illustrate the difference between maturation and training.
To illustrate how knowledge of infancy can help the teacher.
To illustrate growth gradients of coordination and motor skills.
To illustrate trends in growth, such as, parts of the body grow at different rates, ratio of size of parts to an adult, and maturity index as measured by bone ossification.
To illustrate the great amount of sleep needed by infants and the gradual lessing of need with age.
To illustrate the normal locomotion development and reason for abnormal development.
To illustrate the normal development of speech and the coordination of various speech organs.
To illustrate the skeletal arrangement of bones and purposes of ligaments and muscles.
To illustrate the major milestones and when they occur normally in the first four years.

D. The two types of body growth are anatomical and physiological.

To illustrate that anatomical growth refers to the development of body structure and may be used to predict sexual maturity.
To illustrate that physiological growth is concerned with body function.
To illustrate that growth index is measured by weight, height, dentition, ossification, and ratio between height and circumference of calf.
To illustrate use of Wetzel Grid as a graphic method for measuring the direction and rate of growth.
To illustrate that adequate diet is essential to normal growth and bizarre foods are a major cause of frequent upset stomachs and skin conditions of adolescents.
To illustrate the significant changes occurring in the heart and circulatory system during childhood and adolescence.
To illustrate the significant changes in respiratory rate and breathing capacity.
To illustrate the importance in body temperature, blood pressure, pulse, and basal metabolism rate.
To illustrate the role of the endocrine or ductless glands in physical, mental, sexual, and emotional maturity and their relation to the nervous system.
To illustrate the role of thyroid, parathyroid, pituitary, adrenal, gonad, thymus, and pineal glands.
To illustrate the cause and effect of hyperthyroidism and hypothyroidism.
To illustrate the relationship between physical growth and social and emotional adjustment.
To illustrate the need for boys and girls to understand the nature and significance of puberty before they reach sexual maturity.

E. Motor abilities are various types of bodily movements as a result of coordinated activities of nerves and muscles.

To illustrate that the factor of maturation is most important in development of motor abilities and training attempts too early are useless.
To illustrate the definite pattern in development of sitting and walking, but that rate varies in individuals because of such factors as nutrition, body weight, body build, illnesses, sensory defects, slippery floors, falls or poor intelligence.
To illustrate that manipulation requires eye-hand coordination.
To illustrate the four fundamental motor abilities: speed, accuracy, steadiness, and strength of voluntary movement.
To illustrate the use of tests devised to measure motor abilities.
To illustrate the basic principles of motor learning to use when teaching a new skill.

F. Physical handicaps are vision, hearing, speech and crippledness and should be recognized by the teacher.

To illustrate the error of using tests that were standardized on normal children when testing handicapped students.
To illustrate that a vision handicap results in withdrawing, possible personal maladjustment, and low leadership.
To illustrate that ways of detecting auditory handicaps in children are failure to respond, responding with "huh," "what," etc., high voice, monotone, and much volume.
To illustrate the effects of auditory handicaps.
To illustrate non-organic speech handicaps.
To illustrate the conflicts that result from crippled persons not accepting their limiting condition.

G. Human behavior is affected by the organic foundation of a person.

To illustrate the role of instinct.
To illustrate the nature and structure of key glands.
To illustrate the difference between duct and endocrine glands.
To illustrate some physical needs of human organisms and their relationship to classroom performance.
To illustrate the meaning of hyperthyroid and hypothyroid.

UNIT III. MENTAL GROWTH AND DEVELOPMENT

Objective: To understand the relation of mental growth to the total development.

A. The most complicated human activity is language; it is closely correlated with intelligence.

To illustrate that time of acquiring speech differs, but follows six stages.

To illustrate the difficulties of preschool children, such as, omissions, error in usage, word coinage, mutilations, substitutions, transpositions, and use of onomatopoeic words.
To illustrate serious speech difficulties of stuttering and stammering.
To illustrate the effect of socioeconomic status on the language of children.

B. Intelligent behavior is an individual's capacity for adjustment and is organized as a hierarchy of abilities.

To illustrate that intelligence is influenced by age and environmental conditions.
To illustrate that pronounced disorder of physiological function or any sensory defect will have an adverse effect on the development of the nervous system.
To illustrate the normal mental growth pattern of any individual from birth to mental maturity.
To illustrate that both heredity and environment are necessary to the development and function of intelligence.
To illustrate that there appears to be little if no relationship between intelligence and sex, health, or temporary emotional and personal disturbances.

C. The most accurate measurements of intelligence known are test results.

To illustrate the positive relationship between measurable intelligence and certain socioeconomic status scales.
To illustrate the history of testing.
To illustrate types of test items, such as, sensory and motor performances, analogies, opposites, comprehension questions, vocabulary, similarities and differences, completions, absurdities, deferred memory, memory for meaningful material, and mechanical or rote memory.
To illustrate the meaning of IQ and the influence of age, background, degree of brightness, and emotional stability, and the normal distribution of intelligence.
To illustrate the best use of test results in school.
To illustrate the meaning and use of measures of central tendency, variability, and correlation.
To illustrate factors which have an influence upon validity and reliability of intelligence test scores, such as, fatigue, training, emotional make-up, language facility, physical handicaps, and the training and objectivity of the tester.

UNIT IV. SOCIAL DEVELOPMENT

Objective: To understand the social place of an individual's total make-up.

A. Social development is the process of learning how to live, work, and play with others; it is a major developmental task, but long and tedious.

To illustrate the social development from birth with no perception of the relationship of others until social maturity.
To illustrate imitation as a factor of socialization.
To illustrate the social adjustment in starting school.
To illustrate the techniques of studying the various interrelationships.
To illustrate the difference between psychogenic and biogenic needs and how they are related to social development.
To illustrate adjustment or defense mechanisms.
To illustrate the role of the school in social development of pupils.
To illustrate leadership characteristics and factors that influence it, such as, physical size, originality, drive or motivation, intelligence, appearance, extroversion, energy, vigor, and social status.
To illustrate how attitudes, interests, standards and aspirations develop.

B. Socialization is a fundamental aspect of personality development or the unique way an individual's traits are functionally related.

To illustrate the two points of view: atomistic (analyze into its fundamental traits) and holistic (emphasize the totality of pattern).
To illustrate that the family has the greatest influence of any cultural agency upon the child.
To illustrate the effect the status of the family has on personality.
To illustrate the differences in personality growth as a result of democratic and authoritarian teachers.

C. The personal and social aspects of growth are characterized as being normal or abnormal by the individual's behavior.

To illustrate the changes from self-centered activity and social relations to social ability and social cooperation.
To illustrate that normal behavior at a stage may be mistaken for abnormal or antisocial behavior by adults who judge by their standards.
To illustrate that inward reactions are more indicative of personal and social adjustment than outward behavior.
To illustrate the need for a balance between freedom and restraint and rest and activity to insure mental health.

D. The teacher must have knowledge of organic factors, interpersonal factors, and evaluative factors in order to understand a child's personality and behavior.

To illustrate the reactions as displayed in the personality and behavior as a result of the organic factors of hunger, pain, energy, cleanliness, and others.
To illustrate the reaction as displayed in the personality and behavior resulting from interpersonal factors, such as, the relationships of the child to his parents, siblings, peers, and teachers.

E. Sexual maturity brings new and significant factors into the process of social growth.

To illustrate the change from the homosexual grouping of the preadolescent period to the heterosexual crowd of early adolescence to the couples of late teens.
To illustrate the difficulties of the period of adolescence to both adults and youth.
To illustrate the importance of peer standards and the conflict between it and adult standards of parents and teachers.

F. Play and recreation are vital factors in the process of socialization.

To illustrate how age, sex, intelligence, emotional stability, economic status, urban or rural environment, seasons of the year, and type of neighborhood affect play development.
To illustrate different theories of play.
To illustrate that through play activities symptoms of social maladjustment are seen more clearly.

UNIT V. EMOTIONAL DEVELOPMENT

Objective: To understand that the extent to which an individual's urges and interests are satisfied is basic to the kind of emotional experiences which are likely to result.

A. An emotion is a response to a situation for which one is unprepared, and involves gain or loss.

To illustrate the physiological changes that accompany emotions.
To illustrate that most emotional experiences and behavior arise from drives and motivation.
To illustrate defense mechanisms.

B. Complex human emotions are a function of the entire organism.

To illustrate that physical changes accompanying strong emotions are a result of a shift in the autonomic nervous system.
To illustrate the physical changes that accompany strong emotions, such as, visceral, circulatory, respiratory, glandular, dilation of pupils, and inhibition of digestion.

C. Teachers must be aware of the types of situations and principles underlying methods of control in guiding emotional experiences of children and adolescents.

To illustrate the fears and worries of children and adolescents and the techniques of using the association of pleasantness and the success with fear to overcome it.
To illustrate the cause of anger and the factors to consider in controlling anger.
To illustrate the causes of jealousy and ways to prevent it.
To illustrate problems of sex education and the importance of sexual maturity.

UNIT VI. LEARNING

Objective: To understand that learning is an active process that needs to be stimulated and guided toward desirable outcomes and to understand the role of the teacher and student in this process.

A. Learning is the improvement an individual makes in adjusting to environmental situations.

To illustrate how learning is transferred.
To illustrate the difference between maturation and learning.
To illustrate the difference between intelligence and learning.
To illustrate that children have the ability to reason.
To illustrate that learning is affected by age, sex, health, physical condition, and socio-economic background.
To illustrate that learning is uneven and irregular, characterized by spurts and plateaus.
To illustrate the wide individual differences in learning capacity.
To illustrate effect of emotional factors in learning.
To illustrate the role of drill and practice.
To illustrate the conditions and effects of success and failure.
To illustrate methods of problem solving.
To illustrate the four fundamentals of learning.

B. Two types of learning are perceptual and conceptual.

To illustrate that perception develops gradually and begins when an individual gives meaning to his sensory experiences.
To illustrate that conceptual learning has its beginning in the complex combining of abstractions and generalizations.
To illustrate that a basic factor in learning is orientation in time and space.
To illustrate that background for thinking is perceptual development.

C. The three major theories of learning are connectionism, conditioning, and field theory.

To illustrate that connectionism stresses the S-R bond, trial and error, and the importance of goal and drive.
To illustrate that conditioning is a shift from original natural stimulus to one associated with it.
To illustrate that the field theory emphasizes the wholeness, the ability to grasp relationships and insight.

D. Drives and motives are necessary in the process of learning.

To illustrate how biological drives become conditioned to social experiences.
To illustrate that generally intrinsic is better than extrinsic motivation.
To illustrate that, generally, praise is better than reproof.
To illustrate the meaning of climate in a classroom and its relation to learning.

TABLE 2.--UNIT TITLES, OBJECTIVES AND CONCEPTS WITH SUGGESTED ILLUSTRATIONS, EDUCATION 333 - EDUCATIONAL EVALUATION AND GUIDANCE

UNIT I. BASIS OF EDUCATIONAL EVALUATION AND GUIDANCE

Objective: To understand the relationship of learning concepts and developmental tasks to the objectives and functions of education, learning outcomes, and methods and materials of instruction.

A. All children and youth have basic physical, psychological, and social needs, which during the developmental stages of growth are met in varying degrees. If these needs are met they will contribute to the meeting of future needs.

To illustrate some developmental tasks as they are related to learning.
To illustrate some developmental tasks as they relate to physical needs of children and youth.
To illustrate some developmental tasks as they relate to the social needs of children and youth.

B. The desire to learn comes from the needs of the child and is reflected in his stage of maturation.

To illustrate differences in physical maturity of children of the same chronological age.
To illustrate differences in mental maturity of children of the same chronological age.
To illustrate factors relating to the motivation at different maturity levels.

C. The realistic purposes and goals of education are based on the needs common to individual children and youth.

To illustrate some of the needs that are common to most children and youth.
To illustrate the relationship of the major goals of education to specific developmental tasks.
To illustrate the relationship of curriculum to goals and to needs of children and youth.
To illustrate the development of teaching units as contrasted to resource units.

D. These realistic purposes and goals of education suggest learning activities which will bring about desired behavior changes which are within the capacities of the school population.

To illustrate the function of the elementary school.
To illustrate the function of the junior high school.
To illustrate the function of the senior high school.
To illustrate the process of determining educational objectives.
To illustrate the process of lesson planning.
To illustrate desirable outcomes from learning activities.

E. Proper use of methods and materials which are appropriate to the needs of pupils and to the nature and difficulty of concepts to be learned will facilitate learning.

To illustrate the use of a wide variety of methods and materials in relation to objectives based on needs of particular students.
To illustrate the use of special aids for clarifying difficult concepts.
To illustrate the values derived from the proper use of appropriate materials.
To illustrate the physical facilities necessary for the utilization of appropriate materials.
To illustrate the professional requirements for utilizing certain materials.
To illustrate acceptable techniques for using motion picture films.

UNIT II. THE FUNCTION OF EVALUATION AND GUIDANCE.

Objective: To understand the nature and purposes of the role of the teacher in evaluation and guidance.

A. Evaluation is the process of making value judgments as to the quantity, quality or degree of progress which the pupil has achieved in relation to the goals and objectives of education.

To illustrate how information is used in making value judgments as to the quantity of goals and objectives achieved.
To illustrate how information is used in making value judgments as to the quality of achievement of goals and objectives of education.
To illustrate how information is used in making value judgments relative to the degree of progress achieved by pupils in relation to the goals and objectives of education.

B. Value judgments are based on pertinent information obtained through both subjective and objective techniques.

To illustrate subjective techniques of gathering information through anecdotal records and observation.
To illustrate subjective techniques of gathering information through conferences with pupils and parents.
To illustrate subjective techniques of gathering information through the use of autobiographies, sociometric devices, rating scales and cumulative records.
To illustrate objective techniques of gathering information through teacher-made tests and standardized tests.

C. Guidance is a process which helps to provide a variety of experiences which enable the child to develop adequate methods of self-adjustment in meeting personal, social, and academic needs.

To illustrate how a teacher can use class projects to assist in developing self-adjustment.

D. Since guidance is concerned with meeting pupil needs, it can be structured as a service. The administrative framework, then, is a group of appropriate functions based on local needs.

To illustrate the administrative and service functions of a school guidance program as it relates to classroom instruction.
To illustrate the administrative and service functions of a school guidance program as it relates to local needs.

E. Guidance in the classroom is a process which helps the pupil develop sound study habits and practices in relation to his learning activities.

To illustrate that evaluation and guidance will result in better instruction and consequently better outcomes.
To illustrate methods of developing sound study habits.

F. Successful evaluation involves the process of (1) defining the problem, (2) collecting information relating to the problem, (3) bringing the information to bear on the problem and making judgments, and (4) planning steps to be taken in relation to these judgments.

To illustrate the steps in the evaluative process.

G. Measurement is a means of gathering objective information for evaluative purposes.

To illustrate the application of tools of evaluation and measurement as they relate to the instructional and guidance tasks.
To illustrate how tests provide objective information.
To illustrate types of tests for specific educational purposes.
To illustrate the relationship of measurement to evaluation.

H. While the child is to be considered as a total person there are certain areas of the child's life and development which are of concern to the teacher for purposes of evaluation and guidance; these are physical aspects, mental abilities, emotional and social adjustment, attitudes, interests, environment and background.

To illustrate how the knowledge and understanding of developmental tasks is applied in classroom guidance.
To illustrate how an understanding of the principles of evaluation and measurement is used in guidance.

I. A teacher who is effective in evaluation and guidance will possess a knowledge and understanding of the educational purposes of various types of objective tests.

To illustrate the advantages and limitations of teacher made tests for gathering information.
To illustrate the preliminary preparation for the teacher made objective test, such as, a table of specifications in relating learning outcomes to content taught.
To illustrate the types of objective items, the use, limitations, and construction of each.
To illustrate the organization of the objective test.
To illustrate the use of an analysis of test items.
To illustrate the advantages and limitations of standardized tests for gathering information.
To illustrate the use of standardized tests in the achievement, mental abilities, and social-adjustment areas.
To illustrate the qualities of a good measuring instrument.

J. A teacher who is effective in evaluation and guidance will possess an understanding of the language of measurement and testing and a skill in their application.

To illustrate the different measures of central tendency.
To illustrate the mode as a crude measure of central position.
To illustrate the median as a measure of a central position uninfluenced by the magnitude of scores.
To illustrate the mean as a measure of central position taking into consideration the number and magnitude of scores.
To illustrate graphic representation of measures of central tendency.
To illustrate measures of dispersion.
To illustrate the range as a crude measure of dispersion.
To illustrate quartile deviation as a measure of dispersion based on the number of scores.
To illustrate the standard deviation as a measure of dispersion based on the mean as a point of reference or departure and influenced by the number and magnitude of scores.
To illustrate graphic representation of measures of dispersion.
To illustrate the normal distribution curve as a mathematical ideal and that the distribution of a class does not usually fit this curve.

K. Pupil marks represent the judgment of the teacher and should be based on an effective evaluation.

To illustrate teacher use of information gathered during the course of a semester in arriving at pupil marks.
To illustrate what is contained in an adequate reporting system.

TABLE 4.—UNIT TITLES, OBJECTIVES, AND OBSERVATIONAL GOALS, EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE

UNIT TITLE	OBJECTIVE	OBSERVATIONAL GOALS
I The Role of Education in American Culture	To understand the nature of the American culture and the role of the individual and the school in cultural and social change.	1. The use of democratic and undemocratic methods in the classroom. 2. Democratic practices in student activities. 3. Indications of independent thinking among pupils. 4. Indications of a friendly and cooperative atmosphere in the school. 5. Student application of the method of problem solving in learning. 6. Indications that learning involves more than memorizing facts. 7. The use of effective methods in handling controversial issues in teaching. 8. Instances of correlation between school activities and the tasks of contemporary living. 9. Indications that children come from homes of different cultures. 10. Indications that patterns of culture are universal. 11. That there is usually opposition to cultural changes. 12. Indications that changes are a result of the interaction of individuals and new discoveries. 13. Indications that the school performs a role in perpetuating or transmitting the desirable traits of a culture. 14. Instances of tolerance and intolerance toward other cultures. 15. Indications that culture is perpetuated by imitation. 16. That the behavior of students can be modified towards individuals and groups. 17. Indications that the school is performing a role in helping students to become accepted by their peers. 18. Indications that the school provides for individual differences in educating the immature members of society. 19. Indications that the school is concerned with the growth and development of the whole child. 20. Indications that the school is concerned with the growth and development of students as individuals.
II The Changing Community and Education in America	To understand the effects of the changing community organization and life on education and the school as a social institution	1. Indications of changes in value systems, attitudes, and patterns of behavior of students as a result of education. 2. The role of the community in improving the schools. 3. The role of the school in improving the community. 4. The leadership role of the school in educational change. 5. Indications that society is changing. 6. The community's responsibility to the school. 7. The school's responsibility to the community. 8. The changing role of parents. 9. Instances of the conflict between the school and other community agencies because of transition. 10. Indications that good teachers are good citizens of the community. 11. Indications that schools and individuals must change. 12. Indications that the demand for change in schools is continual. 13. Indications that the curriculum and methods often do not meet the needs of some students. 14. Indications that many citisens would have the school remain the same as it was when they went to school. 15. That a good teacher uses aids, draws upon the storehouse of the past, and stresses the importance of truth and wisdom.
III Social Stratification in American Society and Its Reflection in Education	To understand the role and effects of the changing American family, organized pressure groups, and social class on the school and its program	1. Indications of educational problems related to transient population. 2. Indications of educational problems related to impoverished rural areas. 3. Indications of problems related to ethnic groups. 4. Indications of educational problems related to students from lower class cultures. 5. Indications of educational problems that have their causes in the class system. 6. Instances when the school can solve problems due to social status. 7. Instances when the school affects students depending upon their socio-economic status. 8. Indications of prejudices between ethnic groups and how they are learned. 9. The difficulties of students rising above their environment. 10. Indications that prejudices can explode into violence. 11. The inadequate diet of the lower class cultures. 12. Indications that a lower class culture is not always conducive to getting an education. 13. The poor physical facilities of schools in poverty stricken areas. 14. Indications that the curriculum should be based on the needs of the students and the community. 15. Indications that educational materials and methods are often meaningless to lower class cultures. 16. Indications that group attitudes have the most prominent role in the formation of individual values. 17. The similarities and differences between ethnic groups. 18. Indications that many people of the lower class cultures are suspicious of the school. 19. The similarities and differences between social classes. 20. Indications that attitudes of parents and teachers are often transferred to students. 21. Indications that a better understanding of social stratification would help teachers better understand behavior, attitudes, and goals of students. 22. Indications that the school is not always organized for students of lower class cultures.
IV Welfare Levels, Educational Opportunity, and the School Program	To understand the relationship of various economic levels to attitudes toward education, curriculum selection, and other major problems in education	1. Indications that the middle class orientation of schools often causes students of a lower class to drop out. 2. Indications that the academic orientation of schools often causes students of non-academic ability to drop out. 3. Indications that the curriculum and methods being used do not seem to meet the needs of some students. 4. Indications that a basic tenet of our democracy is the availability of free schools for all children. 5. The inequality of educational opportunity. 6. Advantages and disadvantages in the consolidation of small rural schools. 7. The similarities and differences between a consolidated high school and a college preparatory or trade school. 8. Indications that the curriculum should be based on the needs of the students and the community. 9. The problems related to mass education and crowded schools. 10. The contrast in different types of schools and their socio-economic environment, such as, one-room school, a three- and four-room school, a village school, a small consolidated town school, and a large rural consolidated school. 11. The contrast in different types of schools and their socio-economic environment in a large city. 12. The differences and similarities in the educational program in different types of schools. 13. The contrast between two types of large towns, the stable town, with little or no growth, and the highly mobile town, with rapid growth.

TABLE 5.—UNIT TITLES, OBJECTIVES, AND OBSERVATIONAL GOALS, EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT

UNIT TITLES	OBJECTIVES	OBSERVATIONAL GOALS
I General Principles of Human Growth and Development	To understand the nature of growth and development of children	1. Sex differences. 2. The tendency toward positive correlation in growth of different areas of development. 3. That growth tends to be continuous, not uniform, but fluctuates in rate during different stages in the growth cycle. 4. That the order of development follows a common pattern or cycle, but the rate varies. 5. That the developmental process is first general, gradually becoming specific because of expansion and specialization. 6. Indications of the complexity of the process of growth. 7. Indications of the interrelatedness of the process of physical growth.
II Physical Growth and Development	To understand the progressive stages of physical growth and the school's part in providing an educational program for physical development	1. Characteristics peculiar to different cycles of growth in early childhood, later childhood, preadolescence, and adolescence. 2. Symptoms that might indicate the effects of environmental conditions on growth, such as, malnutrition, lack of sleep, uncleanliness, improper medical care, and physical exhaustion from work. 3. Contrast in height, weight, and body proportions in children at the pre-school, elementary, junior high, and senior high levels. 4. Body structure and co-ordination in play as they indicate good or poor physical health. 5. Emotional and social behavior resulting from physical deviation. 6. Physical handicaps, such as, vision, hearing, speech, or crippleness and whether they are corrected or not. 7. Characteristics or symptoms indicating abnormal gland functions.
III Mental Growth and Development	To understand the relation of mental growth to total development	1. Contrast in mental ability in individuals at the elementary, junior high, and senior high levels, and forms of mental activities at these levels. 2. Symptoms of social and emotional behavior that might be attributed to differences in mental ability. 3. Relationship of intelligence to verbal ability to communicate effectively. 4. Evidences of different kinds of intelligence, such as, abstract, social, mechanical, and clerical. 5. The administration of an individual mental test.
IV Social Development	To understand the social phase of an individual's total make-up	1. Children imitating adults in social roles. 2. Social adjustment difficulties in starting or transferring to a new and different school. 3. The relationship between social factors, the basic urges, and interests and how these social factors develop through various levels. 4. The importance of the group and the individual's relations to the group. 5. The need for behavior growth by the group and the individual in the group and the interaction between them. 6. The importance of character development and the influence the group has upon it. 7. Problems of social adjustment in relation to physical attractiveness, intelligence, special skills, vocational interests, and social status. 8. The need for adult supervision in social activities in pre-school and primary grades. 9. The social activities of the secondary school and the role of the school and the faculty. 10. How children attempt to secure independence from adults as they grow older. 11. The leadership and follower characteristics and factors that influence them, such as, physical size, originality, drive or motivation, intelligence, appearance, extroversion, energy, vigor, and social status. 12. How normal social behavior in a child or adolescent may be mistaken for abnormal or antisocial behavior by adults who judge by adult standards. 13. The change from the homosexual grouping of the pre-adolescence period to the heterosexual crowd of early adolescence to the couples of late teens. 14. The conflicts arising between peer standards and adult standards of parents and teachers. 15. How age, sex, intelligence, emotional stability, economic status, urban or rural environment, seasons of the year, and type of neighborhood affect play development.
V Emotional Development	To understand the extent to which an individual's urges and interests are satisfied is basic to the kind of emotional experiences that are likely to result	1. The various stages of emotional development in regard to stimuli and responses at these stages. 2. Indications of affection and love as displayed by children and adolescents. 3. Symptoms of fears and worries and techniques used to overcome them. 4. Symptoms and probable causes of anger; the influences of age, sex, and environmental conditions; and the factors to consider in teaching children to control anger. 5. Symptoms of jealousy, attempts to determine the causes, and ways to prevent. 6. Indications of the problems and frustrations of children and adolescents that act as stimuli resulting in emotional outbreaks. 7. Devices used by subjects to get attention. 8. Defense mechanisms, such as, compensation, aggression, rationalisation, delusions, identification, displacement, projection, withdrawal, and negativism, and their relation to emotional maturity.
VI Learning	To understand that learning is an active process that needs to be stimulated and guided towards desirable outcomes and the role of the teacher and student in this process	1. The stages of maturation and its relationship to the learning process. 2. The effect of the pupil's understanding of the learning outcomes or goals. 3. The effect of emotions in helping or hindering learning. 4. The development of skills and study habits. 5. The effects of a favorable attitude, interest, meaningfulness, vividness and opportunity for use on efficiency and performance. 6. The effects of success and failure. 7. Different techniques of handling discipline problems. 8. The wide individual differences in learning capacity. 9. How behavior can be controlled by reinforcement. 10. How the climate of a classroom affects learning. 11. The effects of fatigue and effort. 12. The difference in attention span for different levels. 13. The modification of behavior through learning experiences.

TABLE 6.—UNIT TITLES, OBJECTIVES, AND OBSERVATIONAL GOALS, EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE

UNIT TITLES	OBJECTIVES	OBSERVATIONAL GOALS
I Basis of Educational Evaluation and Guidance	To understand the relationship of learning concepts and developmental tasks to the objectives and functions of education, learning outcomes, and methods and materials of instruction	1. Indications that developmental tasks are related to learning. 2. Indications that some developmental tasks are related to physical needs of children and youth. 3. Indications that some developmental tasks are related to social needs of children and youth. 4. Indications that the desire to learn stems from the developmental needs of the child. 5. Differences in maturity of the various developmental tasks among children of the same chronological age. 6. Indications that the purposes and goals of education are based on the needs common to individual children and youth. 7. Indications of the relationship of the curriculum to goals and needs of children and youth. 8. Indications of the relationship of the major goals of education to specific developmental tasks. 9. Differences and similarities in the function of evaluation and guidance in the elementary, the junior high and the senior high. 10. Evidence that learning activities should bring about desired behavior changes compatable with the ability of the pupils. 11. The use of a wide variety of methods and materials in relation to objectives based on the needs of particular students. 12. Indications that difficult concepts can be clarified by the use of special media. 13. Indications of the value to be derived from the proper use of appropriate materials.
II The Function of Evaluation and Guidance	To understand the nature and purposes of the role of the teacher in evaluation and guidance	1. Indications that the classroom guidance procedures are based upon the developmental needs of children. 2. Indications of information being used in making value judgments as to the quality of goals and objectives. 3. Indications of information being used in making value judgments of progress of pupils in achievement of goals and objectives. 4. Instances and indications of the use of information obtained from subjective techniques, such as, anecdotal records, observations, conferences, interviews, and autobiographies in making value judgments. 5. Instances and indications of the use of information obtained from objective techniques, such as, teacher-made and standardized tests in making value judgments. 6. Instances where ths teacher uses class projects and rewarding experiences which enable the child to develop adequate methods of self-adjustment in meeting personal, social, and academic needs. 7. Indications of the administrative and service functions of a school guidance program as it relates to classroom instruction. 8. Indications of the value of evaluation and guidance in instruction and learning. 9. Instances of students making use of the evaluative process in problem solving. 10. The application of measurement in evaluation. 11. The use of the tools of measurement in the instructional and guidance task. 12. Indications that a teacher is concerned with a child's physical development, mental ability, emotional and social adjustment, attitudes, interest, environment, and background. 13. The use of various types of standardised tests to obtain objective information for stated educational purposes.

criteria used were: (1) the appropriateness of the instrument with reference to adequate norms, reliability, and validity; and (2) practicality.

From all standardized instruments under consideration, the following were chosen:

> Cooperative School and College Ability Tests which yield a verbal score and quantitive score --designed to measure developed ability indicative of the relative academic success the student is likely to achieve in his next steps up the educational ladder.[4]
>
> Minnesota Teacher Attitude Inventory designed to measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships, and indirectly how well satisfied he will be with teaching as a vocation.[5]
>
> Sims SCI Occupational Rating Scale designed to reveal the level in our social structure -- i.e., the social class -- with which a person unconsciously identifies himself. The scale consists of a list of forty-two occupations, representative of varying levels of socio-economic status...With the SCI Scale, not only is the purpose of the inquiry disguised but a numerical description of class affiliation is obtained...It yields more refined information and makes possible more exact investigation of the phenomenon of class identification.[6]

Construction of Achievement Tests

The experimental instruments developed in this study were achievement tests designed to measure understanding of concepts for each course. The concepts previously identified and selected for each course were the basis for the preparation of the achievement tests. A variety of multiple-choice test items with four alternate responses which related to each concept was written. These items called for the application of philosophy, psychology, and evaluation, as well as a knowledge of subject matter. The items were pooled and submitted to course instructors for their criticisms and suggestions with reference to structure, content, and adequate coverage. The one-hundred best items in each course of the study were then randomly arranged in mimeographed test booklets.

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[4] Examiner's Manual, Cooperative School and College Ability Tests. Princeton, New Jersey: Cooperative Test Division, Educational Testing Service, 1955, p. 3.

[5] Walter W Cook, Carroll H. Leeds, and Robert Callis. The Minnesota Teacher Attitude Inventory Manual. New York: The Psychological Corporation, 1951, p. 3.

[6] Verner M. Sims. Sims SCI Occupational Rating Scale, Manual of Directions, New York: World Book Company, 1952, p. 1.

The tests were adminstered as final examinations to all sections of education students enrolled in the three courses during the 1959-60 spring semester for the purpose of determining the difficulty levels and discrimination indexes of items through item analysis techniques. Of the one-hundred items in each area, the eighty items of moderate difficulty with the highest discrimination values were retained and reassembled for the final form of the achievement test. A test of this length could be completed during a regular class period of fifty minutes.

The reliability of the final test was estimated by using scores for odd- and even-numbered items and applying the Spearman-Brown prophecy formula. The reliability coefficients and standard errors of measurement were: The School in American Culture, $r = 0.778$ and $SE_{meas} = 3.84$; Human Growth and Development, $r = 0.618$ and $SE_{meas} = 4.20$; and Educational Evaluation and Guidance, $r = 0.616$ and $SE_{meas} = 4.28$.

In order to determine the concurrent validity of the test scores, zero-order correlations were computed for each course between test scores and final grades in the course. Letter grades were converted to numerical values as follows: A was designated as twelve points; A- as eleven, B+ as ten, B as nine, B- as eight, C+ as seven, C as six, C- as five, D+ as four, D as three, D- as two, and F as one point. The obtained correlations between the test scores and final grades for the three respective courses were: r = 0.446, r = 0.573, and r = 0.501. Since all correlations were significant at the 0.01 level, the achievement tests were considered valid instruments for measuring the understanding of concepts in the three sequential professional education courses. See copies of these three achievement tests in Appendix I.

Selection and Evaluation of Film Sequences

The unit objectives, together with the clusters of concepts and suggested illustrations described earlier in this section, served as criteria for selecting film sequences from currently available films. These films were selected on the basis of the degree to which they depicted situations pertinent to selected concepts and the degree to which they portrayed educational situations suitable for observational purposes. The criteria for selecting the films from which the film sequences were selected were:

1. The objectives to be achieved should form the basis for the selection of materials.
2. Materials selected should present the sequences in logical progression.
3. Materials should be selected that will make possible the maximum utilization of length and time.
4. Materials selected should avoid the development of negative attitudes.
5. The content of materials selected should be free from inaccuracies.
6. Materials selected should be suitable for the level at which they are being used.
7. The materials selected must pertain to opportunities which relate to future experiences.
8. The events pictured by the film sequence should be of sufficient quality to stimulate understanding of conceptual principles.

9. The technical qualities of materials should be satisfactory.

10. Sequences should be sufficiently current to enhance understanding of conceptual principles.

Over 200 films were viewed in an effort to identify sequences which best illustrated the final list of objectives and concepts. Once the sequence was identified, it was viewed and evaluated by faculty members responsible for teaching the various courses included in this study. Only those sequences which were considered most illustrative of the behavior situations or community settings pertinent to related objectives and concepts were retained. From a total of 69 films previewed in the area of The School in American Culture, 14 sequences were selected. Twenty-five sequences were selected from 113 films previewed in the area of Human Growth and Development. In the area of Educational Evaluation and Guidance, only 21 films were previewed from which nine sequences were selected. The titles of the films and the unit objectives for which the sequences were selected in each course are shown in Tables 7, 8, and 9. Also, a complete list of the films previewed, including those from which sequences were selected for each course together with names and addresses of producers and/or principal distributors, is shown in Appendix II. Permission was obtained from each of the film companies for the purchase and restricted use of the selected film sequences which were shown out of context.

TABLE 7.— UNIT OBJECTIVES AND TITLES OF FILMS FROM WHICH FILM SEQUENCES WERE OBTAINED
EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE

UNIT NUMBER	UNIT OBJECTIVES	TITLES OF FILMS
I.	To understand the nature of the American culture and the role of the individual and the school in cultural and social change.	Defining Democracy Practicing Democracy Freedom to Learn Man and His Culture Who Will Teach Your Child Design of American Public Schools
II.	To understand the effects of the changing community organization and life on education and the school as a social institution.	School and Community Who Will Teach Your Child
III.	To understand the role and effects of the changing American family, organized pressure groups, and social class on the school and its program.	And So They Live A Desk for Billie Highwalls Learning to Understand Children, Part I.
IV.	To understand the relationship of various economic levels to attitudes toward education, curriculum selection, and other major problems in education.	Problems of Pupil Adjustment: The Drop Out Schools March On Torchbearers of Tomorrow

TABLE 8.—UNIT OBJECTIVES AND TITLES OF FILMS FROM WHICH FILM SEQUENCES WERE OBTAINED, EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT

UNIT NUMBER	UNIT OBJECTIVES	TITLES OF FILMS
I.	To understand the nature of growth and development of children.	Principles of Development Each Child is Different
II.	To understand the progressive stages of physical growth and the school's part in providing an educational program for physical development.	He Acts His Age They Grow Up So Fast Importance of Goals Physical Aspects of Puberty
III.	To understand the relation of mental growth to the total development.	Testing Intelligence
IV.	To understand the social phase of an individual's total make-up.	Social Development Developmental Characteristics of Pre-adolescents Who is Sylvia? Age of Turmoil Children's Play
V.	To understand the extent to which an individual's urges and interests are satisfied is basic to the kind of emotional experiences that are likely to result.	Fears of Children Children's Emotions Personality and Emotions Angry Boy Feelings of Depression Feelings of Rejection Feelings of Hostility
VI.	To understand that learning is an active process that needs to be stimulated and guided towards desirable outcomes and to understand the role of the teacher and student in this process.	Who is Sylvia? Importance of Goals Motivating the Class Learning: Controlling Behavior Through Reinforcement Maintaining Classroom Discipline Answering the Child's Whys

TABLE 9.—UNIT OBJECTIVES AND TITLES OF FILMS FROM WHICH SEQUENCES WERE OBTAINED, EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE

UNIT NUMBER	UNIT OBJECTIVES	TITLES OF FILMS
I.	To understand the relationship of learning concepts and developmental tasks to the objectives and functions of education, learning outcomes, and methods and materials of instruction.	Curriculum Based on Child Development Meeting the Needs of Adolescents
II.	To understand the nature and purpose of the role of the teacher in evaluation and guidance.	Guiding the Growth of Children Defining Democracy Practicing Democracy in the Classroom Learning to Understand Children, Part I and Part II They All learn to Read Discovering Individual Differences

Production of Films and Slide Sequences

As anticipated, not all of the pertinent concepts and objectives were covered in the currently available films. Consequently, it was necessary to produce additional sequences which would adequately illustrate the remaining concepts and objectives. Group conferences with the faculty members concerned with each course were held in order to determine the concepts and objectives not covered by existing films and to determine the types of additional sequences which should be produced. After agreement was reached with reference to the number and kinds of sequences needed, "shooting" scripts were developed for the production of the additional materials. In each case, extensive use was made of consultants who were subject-matter specialists in each of the respective courses. Sequences in the following areas were produced:

The Area of The School in American Culture

Three film sequences were produced for the course, The School in American Culture. The first sequence depicted the different types of schools in Oklahoma; the second depicted the types of communities in which schools were located, and how the characteristics of the communities were reflected in the school program; and the third sequence contrasted a stable and a growing community, pointing out problems faced by each school according to the community it served.

Slide sets were produced depicting various types of schools and community settings. In the production of these slide sets, types of buildings, playground equipment, residences of families of school children, and various affective economic factors in a variety of communities were emphasized.

The Area of Human Growth and Development

A film sequence which would depict more depth in certain areas of children's play was needed for the course, Human Growth and Development.

This sequence was produced at the University School, University of Oklahoma, with kindergarten children. It emphasized play as the work of children and pointed out some of the developmental stages of children in terms of various kinds of play activities.

Additional sequences were also needed to show some aspects of individual differences. Accordingly, a filmstrip contrasting the differences in height and weight of boys and girls at different age levels was produced. This filmstrip depicted the physical differences as they existed at each grade level. Another film sequence was produced which portrayed individual differences in problem-solving activities and which showed the different performance levels of children with different intelligence quotients.

The Area of Educational Evaluation and Guidance

Two sequences were produced in the area of evaluation and guidance. The first was a general sequence describing the evaluation process as used by a teacher for the purpose of arriving at a student's grade. The second sequence showed a process of using both objective and subjective information in the evaluative process.

Relating Film Sequences to Observational Goals

The film sequences selected from currently available films and those locally produced were grouped to correspond to the clusters of concepts described earlier. This grouping resulted in the formation of "vicarious" observations of approximately thirty-minutes of running time for each of the three basic courses. Each of these clusters was then arranged in the order in which the concepts were presented in each course.

TABLE 10.—UNIT NUMBERS, OBJECTIVES, OBSERVATION NUMBERS, TITLES OF FILM SEQUENCES AND TOTAL FOOTAGE OF EACH SEQUENCE, EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE

UNIT NUMBER	UNIT OBJECTIVES	OBSERVATION NUMBER	TITLES OF FILM SEQUENCE	FOOTAGE
I.	To understand the nature of the American culture and the role of the individual and the school in cultural and social change.	1.	Democratic Teaching Controversial Issues	566' 600'
		2.	Culture Changing Behavior American Schools	550' 230' 250'
II.	To understand the effects of the changing community organization and life on education and the school as a social institution.	3.	School and Community Schools in Transition	450' 310'
III.	To understand the role and effects of the changing American family, organized pressure groups, and social class on the school and its program.	4.	Rural Poverty Education of Migrants	400' 900'
		5.	Ethnic Prejudices Lower Class Culture	550' 350'
IV.	To understand the relationship of various economic levels to attitudes toward education, curriculum selection, and orther major problems in education.	6.	Drop-Out Consolidation Inequality of Opportunity	500' 280' 300'
		7.	School and Community Oklahoma Schools and Communities (Slides-Project production)[a]	828'

[a] University of Oklahoma Production

TABLE 11.—UNIT NUMBERS, OBJECTIVES, OBSERVATION NUMBERS, TITLES OF FILM SEQUENCES AND TOTAL FOOTAGE OF EACH SEQUENCE, EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT

UNIT NUMBER	UNIT OBJECTIVES	OBSERVATION NUMBER	TITLES OF FILM SEQUENCES	FOOTAGE
I.	To understand the nature of the growth and development of children.	1.	Developmental Principles	600'
			Individual Differences	550'
II.	To understand the progressive stages of physical growth and the school's part in providing an educational program for physical development.	2.	Developmental Behavior	380'
			Physical Education	200'
			Physical, Pre-Adolescents	100'
			Physical, Adolescents	280'
			Aspects of Growth (Film-Strip)[a]	
III.	To understand the relation of mental growth to the total development.	3.	Testing Intelligence	600'
			Problem Solving[a]	400'
IV.	To understand the social phase of an individual's total make-up	4.	Social Development	425'
			Preadolescence-Social	420'
			Adolescence-Social #2	310'
		5.	Adolescence-Social #1	700'
			Children's Play	700'
		6.	Play: The Work of Children[a]	750'
V.	To understand the extent to which an individual's urges and interests are satisfied is basic to the kind of emotional experiences that are likely to result.	7.	Fears	500'
			Emotions of Children	800'
			Personality and Emotions	115'
		8.	Anger	80'
			Jealousy	280'
			Defense Mechanism: Withdrawal	350'
			Defense Mechanism: Compensation	300'
VI.	To understand that learning is an active process that needs to be stimulated and guided towards desirable outcomes and to understand the role of the teacher and student in this process.	9.	Discipline	400'
			Influence of Emotions	325'

[a] University of Oklahoma Production

TABLE 12.—UNIT NUMBERS, OBJECTIVES, OBSERVATION NUMBERS, TITLES OF FILM SEQUENCES AND FOOTAGE OF EACH SEQUENCE, EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE

UNIT NUMBER	UNIT OBJECTIVE	OBSERVATION NUMBER	TITLES FILM SEQUENCES	FOOTAGE
I.	To understand the relationship of learning concepts and developmental tasks to the objectives and functions of education, learning outcomes, and methods and materials of instruction	1.	Developmental Curriculum Needs of Adolescents	340' 680'
II.	To understand the nature and purposes of the role of the teacher in evaluation and guidance	2.	Guiding Growth Democratic Teaching	520' 566'
		3.	Developing Self-Adjustment	950'
		4.	Grouping Discovering Individual Differences	200' 900'
		5.	The Evaluation Process[a]	364'

[a] University of Oklahoma Production

The titles of the film sequences used in relation to "vicarious" observations, together with the unit number, unit objective, observation number, and footage of each sequence for each course, are shown in Tables 10, 11, and 12.

Length of Observations

As determined by the experimental design, each of the three courses involved four sections of students. Two of the sections were designated as "vicarious" observation groups; the other two were designated as direct observation groups. The selection and composition of these two groups will be discussed in a subsequent section. In order to provide approximately equal time for observation, the length of the "film and slide sequence" clusters was arranged to conform to the time allocated to direct observations. Members of the "vicarious" observation groups were required to view a thirty-minute cluster of film sequences, while members of the direct observation group were required to spend an equal amount of time in direct observation at the University School.

RESEARCH DESIGN AND COLLECTION OF DATA

The experimental aspect of the study was conducted with selected students who enrolled in the College of Education during the fall semester of the 1960-61 school year. The sample was selected during the four-day registration period. The time for a student to enroll was designated by an alphabetical schedule predetermined by the University of Oklahoma.

Sampling Procedure

During the registration period, students were assigned at random to the various sections of each of the courses: Education 52-- The School In American Culture, Education 151-- Human Growth and Development, and Education 222-- Educational Evaluation and Guidance. Since many students tend to show preferences for instructors and for the time at which the courses are offered, randomness of sample with respect to these factors was effected by eliminating the instructors' names from the class schedule and by assigning students to the various sections as they appeared for enrollment. Approximately equal numbers of enrollees were maintained in each section throughout each registration day. The randomizing procedure gave each student an equal chance to included in any one of the sections, regardless of the time at which the student was scheduled to enroll, and resulted in approximately 45 students being enrolled in each section of each of the three basic courses.

Two instructors with relatively comparable qualifications were selected to teach two sections of the same course; one section was designated as the "vicarious" observation group and the other, the direct observation group. The designation of the groups was determined by the flip of a coin. Not until the first meeting of the classes did the instructors or the students know which group would be the "vicarious" observation group. After enrollment was completed, no students were permitted to change sections, and no instructors to change groups.

The random assignment procedure was conducted for the following reasons: (1) to remove possible bias attributable to teacher selection and time of class-offering selection by students, (2) to obtain representativeness of the sample, i.e., both resident and transfer students, and (3) to remove possible bias on the part of the teacher and/or student due to inclusion in vicarious observational experiences or in direct observational experiences.

The scores from the entrance examinations administered by the University of Oklahoma at the time of the students' matriculation were used as a basis for testing the adequacy of sample with reference to scholastic aptitude and achievement.[7] Distributions of the scores are shown in Appendix III.

Experimentation

On the day of the first class meeting, the list of observational goals which had been developed for each course, was distributed to students and faculty. In addition, a set of standardized instructions giving explicit directions relating to the conduct of the experiment was given to each participating student and faculty member. This first class meeting, which served as an orientation period, was conducted by the investigators. It was assumed that this procedure would alleviate any bias attributable to individualized presentation given by specific instructors. For the purpose of coordinating the observations, additional orientation meetings were held with the professors who taught the respective classes.

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[7] These examinations were Ohio State Psychological Examination, Iowa High School Content Battery, and University of Oklahoma Mathematics Placement Examination. The OSPE and IHSCB scores were in decile form, and OU mathematics in raw score form since this is the manner and style of permanent records maintained by the University of Oklahoma Office of Admissions and Records.

Within the sections of each course, classroom consideration of subject matter relating to concept-clusters was coordinated with the observational goals set out for the respective sections. This was accomplished by arbitrarily predetermining the time at which concept-clusters would be considered and the time at which observations relating to these concept-clusters would be made. In the same manner, the times of the vicarious observations were scheduled to correspond with the times scheduled for the direct observations. Vicarious observations relating to the concepts to be taught in each unit were scheduled at the time at which they appeared to contribute most effectively to an understanding of the concepts presented.

Collection of Data

At the onset of the class sessions, the Cooperative School and College Ability Tests, Form 1C, the Minnesota Teacher Attitude Inventory, Form A, the Sims Social Class Identification Occupational Rating Scale, and the achievement test were administered to all students in each section. Hereafter, the standardized tests will be referred to as SCAT, MTAI, and SCI, respectively. These tests were selected as bases for isolating factors such as scholastic aptitude, attitude toward teaching, and identification with a particular socio-economic level which might bias the results of the study. The results of the initial administration of the achievement tests were used as a measure of initial concept understanding in each of the courses and, of course, provided information common to all students.

The SCAT Quantitative, SCAT Verbal, and MTAI raw scores were converted to percentiles using appropriate national norms as established by the respective test publishers. These percentiles were transformed to McCall's T-score equivalents. The SCI obtained scores for socio-economic class identification were used in the original form.

In view of the method of construction, the scores on the achievement tests, which were the number of correct responses, were used in raw score form. The scores obtained from the initial administration of the achievement test will hereafter be referred to as the Pre-test scores.

At the termination of the semester of instruction (during the final examination period), the achievement test was administered again. The obtained scores on this examination were used as the dependent or criterion variable in the final analysis of data. Theses scores shall hereafter be referred to as the Post-test scores.

ANALYSIS OF DATA AND CONCLUSIONS

As previously indicated, the data consisted of scores obtained from the administration of tests designed to yield types of information which were thought to be pertinent to the study. The data obtained from these results were treated statistically in three ways: (1) Pearson product-moment correlations were computed to demonstrate related directional distribution of test scores and linear relationships existing between the various sets of scores; (2) the technique of multiple regression was used to provide maximum utilization of the separate and combined effects of certain independent variables; and (3) an analysis of covariance was used to permit adjustment of mean scores by removal of any regression effect of one or more identifiable independent variables.

In order to facilitate manipulation, each test was assigned the following symbolic equivalents:

X_1= Post-test Scores

X_2= SCAT Verbal

X_3= SCAT Quantitative

X_4= MTAI

X_5= SCI

X_6= Pre-test Scores

The scores for each of these tests may be found in Appendix IV where the distributions were tabulated separately for each course by section and instructor.

Analysis of Data

The data from these tests for the combined sections in each course were analyzed by computing Pearson product-moment correlations which are presented in Tables 13, 14, and 15. There is a consistently significant positive correlation between the Pre - (X_6) and Post-test (X_1) scores and between the Pre-test (X_6) and SCAT Verbal (X_2) scores. These results give support to the belief that in the case of these variables, X_1, X_2, and X_6, the scores would vary in the same direction. The coefficients of correlation between the SCI scores (X_5) and scores for the other variables were consistently non-significant. This supports the assumption that students beginning their professional education courses tend to identify with a single socio-economic stratum. There is only one statistically significant positive correlation between MTAI (X_4) and Post-test (X_1) scores; this occurred in relation to the basic foundation course, Educational Evaluation and Guidance. On the basis of this finding, it was assumed that the relationship of variables involving teacher attitude would not become significant until later in the professional training of the future teacher. The coefficients of partial correlations shown in Table 16 lend further support to the several assumptions presented above.

In order to permit the maximum utilization of the separate and combined effects of the independent variables (X_2, X_3, X_4, X_5, and X_6), a single composite score, Y_i (where i = Education 52, 151, and 222, respectively) was computed for each student using the technique of multiple regression. Since the concepts in each course were different, separate variable coefficients for each course were computed by using an empirical

TABLE 13.—MATRIX OF INTERCORRELATIONS BETWEEN CRITERION AND PREDICTOR VARIABLES, EDUCATION 52 - *THE SCHOOL IN AMERICAN CULTURE*
($N = 164$)

Variable	X_1	X_2	X_3	X_4	X_5	X_6
X_1	1.000	0.663**	0.356*	0.188	-0.018	0.771**
X_2		1.000	0.338*	0.189	0.032	0.678**
X_3			1.000	-0.089	-0.143	0.309*
X_4				1.000	0.093	0.163
X_5					1.000	-0.024
X_6						1.000
Mean	47.76	52.04	49.94	36.57	22.51	42.64
S.D.	8.252	8.364	8.971	7.190	4.694	7.738

*Significant at the 0.05 level of significance.
**Significant at the 0.01 level of significance.

X_1 - Post-Test
X_2 - *SCAT* Verbal
X_3 - *SCAT* Quantative
X_4 - *MTAI*
X_5 - *SCI*
X_6 - Pre-Test

TABLE 14.—MATRIX OF INTERCORRELATIONS BETWEEN CRITERION AND PREDICTOR VARIABLES, EDUCATION 151 - *HUMAN GROWTH AND DEVELOPMENT*
(N = 148)

Variable	X_1	X_2	X_3	X_4	X_5	X_6
X_1	1.000	0.515**	0.172	0.251	-0.056	0.664**
X_2		1.000	0.440**	0.325*	0.003	0.515**
X_3			1.000	0.169	-0.103	0.182
X_4				1.000	0.075	0.283
X_5					1.000	-0.003
X_6						1.000
Mean	48.74	53.03	50.97	37.78	22.78	39.95
S.D.	6.567	8.474	7.628	6.843	4.890	6.781

* Significant at the 0.05 level of significance.
**Significant at the 0.01 level of significance.

X_1 - Post-Test
X_2 - *SCAT* Verbal
X_3 - *SCAT* Quantative
X_4 - *MTAI*
X_5 - *SCI*
X_6 - Pre-Test

TABLE 15.—MATRIX OF INTERCORRELATIONS BETWEEN CRITERION AND PREDICTOR VARIABLES, EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE
(N = 156)

Variable	X_1	X_2	X_3	X_4	X_5	X_6
X_1	1.000	0.582**	0.319*	0.387**	-0.037	0.656**
X_2		1.000	0.280	0.374**	0.176	0.671**
X_3			1.000	0.182	-0.038	0.276
X_4				1.000	0.103	0.431**
X_5					1.000	0.059
X_6						1.000
Mean	48.69	53.76	50.89	42.21	23.69	41.63
S.D.	6.911	8.182	8.509	8.739	5.141	6.800

*Significant at the 0.05 level of significance.
**Significant at the 0.01 level of significance.

X_1 = Post-Test
X_2 = SCAT Verbal
X_3 = SCAT Quantative
X_4 = MTAI
X_5 = SCI
X_6 = Pre-Test

TABLE 16.—b-COEFFICIENTS AND PARTIAL CORRELATION COEFFICIENTS

Variable	Education 52	Education 151	Education 222
b-Coefficients			
X_2	0.222	0.195	0.212
X_3	0.099	-0.041	0.089
X_4	0.070	0.030	0.083
X_5	-0.002	-0.083	-0.151
X_6	0.613	0.517	0.426
Partial Correlation Coefficients			
$r_{12.3456}$	0.259	0.260	0.247
$r_{13.2456}$	0.162	-0.058	0.146
$r_{14.2356}$	0.098	0.040	0.131
$r_{15.2346}$	-0.002	-0.086	-0.153
$r_{16.2345}$	0.573**	0.534**	0.388**

**Significant at the 0.01 level of significance.

formula for a five-factor multiple regression equation.[1] The resulting regression equations were:

Education 52--The School in American Culture

$$Y = 2.597 + 0.2218X_2 + 0.0991X_3 + 0.0703X_4 - 0.0022X_5 + 0.6133X_6$$

Education 151--Human Growth and Development

$$Y = 20.609 + 0.1946X_2 + 0.0406X_3 + 0.0298X_4 - 0.0834X_5 + 0.5172X_6$$

Education 222--Educational Evaluation and Guidance

$$Y = 15.114 + 0.2117X_2 + 0.0892X_3 + 0.0826X_4 - 0.1512X_5 + 0.4263X_6.$$

In recognizing that levels of intelligence frequently affect the results of an investigation where achievement is involved, an attempt was made to separate the students in each section into high, middle, and low subgroups according to scores obtained on the scholastic aptitude test. However, because these subgroups did not meet the requirement of sufficiency of sample size, the sections did not lend themselves to this treatment. Although an analysis of such data in terms of the three subgroups within each section would have contributed some degree of depth, it would not have contributed materially to the general purpose of this study. Consequently, it was decided not to test the effect of varied intelligence levels.

Pursuant to that decision, the mean achievement as measured by the Post-test for all sections was analyzed through the use of analysis of covariance. This technique permits the adjustment of mean scores by removal of any regression effect of one or more identifiable independent variables. In order to facilitate the achievement of the purpose of this study, a null hypothesis which served as a guide in making a basic interpretation was formulated for each foundation course. Even though this particular form of analysis involved the use of mean achievement scores in testing for statistical differences, the related hypothesis is not of consequence in light of the purpose of this study. The null hypotheses tested were:

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[1] The multiple regression coefficients, coefficients of partial and Pearsonian correlation, measures of central tendency, and measures of dispersion were computed by the staff at the University of Oklahoma Computer Laboratory.

Education 52 -- The School in American Culture

Hypothesis: There is no statistically significant difference between mean achievement as indicated by test scores obtained through the measurement of understanding of concepts by students enrolled in Education 52 at the University of Oklahoma who participated in selected vicarious observational experiences and those who participated in direct observational experiences.

Data for this particular course were analyzed and are presented in Table 17. The analysis yielded a significant ratio (F = 8.42) between methods in the direction of vicarious observational experiences. The null hypothesis was rejected. The experimental conclusion was that the students involved in the group who participated in the vicarious observational experiences, determined by analysis of the difference between adjusted means, demonstrated significantly greater understanding of concepts as measured by the Post-test scores than those students who participated in direct observational experiences.

Education 151 -- Human Growth and Development

Hypothesis: There is no statistically significant difference between mean achievement as indicated by test scores obtained through the measurement of understanding of concepts by students enrolled in Education 151 at the University of Oklahoma who participated in selected

TABLE 17.—SUMMARY TABLE OF ANALYSIS OF COVARIANCE, EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE

Source of Variation	Degrees of Freedom	Sums of Squares and Products			Deviation About Regression			F-ratio
		Σx^2	Σxy	Σy^2	$\Sigma x^2 - (\Sigma xy)^2/\Sigma y^2$	d.f.	m.s.	
(r) Replicates	40	3106.98	2286.96	2341.49				
Between Methods (A)	1	21.23	-41.26	80.22				
Between Teachers (B)	1	204.20	176.19	152.03				
Interaction AB	1	15.86	10.29	6.68				
Error	120	7819.46	5346.38	5401.16	2527.31	119	21.24	
A + Error	121	7840.69	5305.11	5481.38	2706.17	120		
Difference for testing among adjusted A-means					178.86	1	178.86	8.42 **
B + Error	121	8023.66	5522.57	5553.19	2531.54	120		
Difference for testing among adjusted B-means					4.23	1	4.23	0.20
AB + Error	121	7835.32	5356.67	5407.84	2529.34	120		
Difference for testing among adjusted AB-effects					2.03	1	2.03	0.10

**Significant at the 0.01 level of significance

TABLE 18.—SUMMARY TABLE OF ANALYSIS OF COVARIANCE, EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT

Source of Variation	Degrees of Freedom	Sums of Squares and Products			Deviation About Regression			F-ratio
		Σx^2	Σxy	Σy^2	$\Sigma x^2 - (\Sigma xy)^2/\Sigma y^2$	d.f.	m.s.	
(r) Replicates	36	1114.74	603.92	734.95				
Between Methods (A)	1	8.76	13.38	20.44				
Between Teachers (B)	1	19.70	-24.15	29.61				
Interaction AB	1	132.43	59.03	26.31				
Error	108	5106.61	2450.77	2292.05	2486.12	107	23.23	
A + Error	109	5115.36	2464.15	2312.49	2489.61	108		
Difference for testing among adjusted A-means					3.48	1	3.48	0.15
B + Error	109	5126.31	2426.62	2321.66	2589.99	108		
Difference for testing among adjusted B-means					103.87	1	103.87	4.47*
AB + Error	109	5239.04	2509.80	2318.36	2521.99	108		
Difference for testing among adjusted AB-effects					35.87	1	35.87	1.54

*Significant at the 0.05 level of significance

TABLE 19.--SUMMARY TABLE OF ANALYSIS OF COVARIANCE, EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE

Source of Variation	Degrees of Freedom	Sums of Squares and Products			Deviation About Regression			F-ratio
		Σx^2	Σxy	Σy^2	$\Sigma x^2 - (\Sigma xy)^2/\Sigma y^2$	d.f.	m.s.	
(r) Replicates	38	2119.86	888.57	813.41				
Between Methods (A)	1	19.39	27.99	40.41				
Between Teachers (B)	1	205.39	86.06	36.06				
Interaction AB	1	8.78	13.76	21.56				
Error	114	5098.19	2709.72	2812.41	2487.41	113	22.01	
A + Error	115	5117.58	2737.71	2852.82	2490.34	114		
Difference for testing among adjusted A-means					2.92	1	2.92	0.13
B + Error	115	5303.58	2795.78	2848.46	2559.52	114		
Difference for testing among adjusted B-means					72.11	1	72.11	3.28
AB + Error	115	5106.97	2723.47	2833.97	2489.68	114		
Difference for testing among adjusted AB-effects					2.27	1	2.27	0.10

vicarious observational experiences and those who participated in direct observational experiences.

Data for the analysis are presented in Table 18. In this analysis, the only point of statistical significance found was between instructors. Since no statistically significant difference was found between types of observational experiences, the null hypothesis was accepted. This statement is appropriate in that the significance in mean achievement is due apparently to the instructor effect exclusive of method.

Education 222 -- Educational Evaluation and Guidance

Hypothesis: There is no statistically significant difference between mean achievement as indicated by test scores obtained through the measurement of understanding of concepts by students enrolled in Education 222 at the University of Oklahoma who participated in selected vicarious observational experiences and those who participated in direct observational experiences.

Data for the analysis are presented in Table 19. In relation to this particular course, all of the tested variables (methods, instructors, and interactions) were non-significant. The null hypothesis was accepted.

Findings and Conclusions

The main analysis was concerned with the determination of the differential effects of vicarious observational experiences and direct observational experiences on the understanding of concepts in basic foundation education courses. The two methods of observational experiences were compared with respect to student achievement in the respective courses as measured by an achievement test. When the adjusted mean achievement scores were treated by analysis of covariance, only one statistically significant difference between methods of observation was found. This difference occurred by students enrolled in The School in American Culture. In this case, the group of students who participated in vicarious observational experiences had the highest mean achievement score.

Since The School in American Culture is the first course in the professional education sequence, most students enrolled in this course have not had an opportunity to acquire any predisposition toward conventional educational methodology. If this assumption is reasonable, vicarious observational experiences were more successful because: (1) the students apparently lacked an orientation to educational situations relating to conceptual principles; (2) the opportunity for observing many of the school-community situations was not available within the immediate confines of the University of Oklahoma; (3) the students enrolled in Education 52--The School in American Culture were just beginning their professional education program; therefore, they had less experience in directly observing situations relating to conceptual principles than students enrolled in the other two courses; and (4) first experiences with direct observation as a means of understanding and reinforcing concepts were frequently bewildering to many students because of the occurrence of unexpected extraneous situations at the time the observation was made.

No statistically significant differences were found between methods of observation in the other two basic foundation courses in education. The conclusion drawn was that there was no difference between vicarious observational experiences and direct observational experiences in contributing to an understanding of concepts unique to Human Growth and Development and Educational Guidance and Evaluation. A statistically significant interaction value obtained for teacher by method suggests that teachers did not operate any more effectively with one method than the other.

In view of these findings, it would appear that in the first professional education course where observational experiences are required for the purpose of helping students to better understand concepts pertinent to the course, students would acquire an understanding more efficiently through the use of films, film sequences, and slides. In subsequent courses, understanding of concepts can be acquired as effectively through vicarious observational experiences as by direct observational experiences.

SUMMARY AND RECOMMENDATIONS

This study was undertaken to determine whether vicarious observation of educational situations made during the professional training period prior to student teaching was as effective for pre-service teachers as when observation of similar situations was made directly. These vicarious observations were made possible through the use of film and slide sequences which presented certain educational principles and concepts of importance to the student. More specifically, the principal question underlying the investigation was whether understanding of the educational concepts in the sequential professional education courses required of all students enrolled in the College of Education at the University of Oklahoma prior to student teaching could be accomplished as well by the use of specifically prepared audio-visual materials as through direct observational experiences.

The sample used in this study was composed of selected students who enrolled in four sections of each of the three foundation courses required of all pre-service teachers enrolled in the College of Education during the fall semester of the 1960-61 school year. The sample was selected during the registration period, at which time students were randomly assigned to the various sections of each of the three courses. The randomness of the sample was further assured by eliminating the instructors' names from the class schedule and also by reserving an equal number of enrollment cards for each section of the three courses each day of enrollment. This procedure gave each student an equal chance to be included in any one of the sections.

In each of the courses, two sections were selected randomly as vicarious observation groups with the other two sections serving as the direct observation groups. Likewise, two professors who normally teach one or more sections of each of the courses were selected to teach the sections included in the study. Each professor was assigned randomly to two sections of the same course; one of which was designated as a vicarious observation section and the other as a direct observation section.

A content analysis of the subject-matter, from which unit objectives and related concepts were formulated, was made for each of the courses included in the study. These objectives and concepts were used as bases for developing observational goals for each course. The observational goals not only served as reference points for the student during each observation, but were also used as guidelines in selecting and producing "film and slide sequences" which were used as vicarious materials for observations.

The experimental phase of the study included four sections or groups in each of the basic courses. Guided by the specific directions included in the observational goals, members of two of these sections made approximately nine 30-minute observations of actual classroom and school-community situations. Concurrently, members of the other two sections, who were also directed by the list of observational goals, participated in nine 30-minute vicarious observational experiences by viewing "film and slide sequences." These "film and slide sequences" depicted the same educational situations being observed by the direct observation group.

Scores from various tests were used to establish common information in relation to participating students. An achievement test was constructed and administered for the purpose of determining the initial concept understanding and the final post-experiment concept understanding of each student. The Cooperative School and College Ability Tests, Form 1C, the Minnesota Teacher Attitude Inventory, Form A, and the Sims Social Class Identification Occupational Rating Scale were administered to each student. The results of these tests were used in identifying factors of scholastic aptitude, attitude toward teaching, and identification with particular socio-economic levels which might bias the results of the study.

The data used in the study were treated statistically in three ways: (1) Pearson product-moment correlations were computed to demonstrate related directional distribution of test scores and linear relationships existing between the various sets of scores; (2) the technique of multiple regression was used to provide maximum utilization of the separate and combined effects of certain independent variables; and (3) an analysis of covariance was used to permit adjustment of mean scores by removal of any regression effect of one or more identifiable independent variables.

Through an analysis of the data yielded from the test scores of participating students and a statistical testing of the hypotheses relative to the study, the following conclusions were drawn:

1. Students enrolled in Education 52 -- The School in American Culture, who participated in vicarious observational experiences demonstrated a significantly greater understanding of concepts than did those students who participated in direct observational experiences.

2. Students enrolled in Education 151 -- Human Growth and Development, who participated in vicarious observational experiences and students who participated in direct observational experiences showed no statistically significant difference between mean achievement of understanding of concepts.

3. Students enrolled in Education 222-- Educational Evaluation and Guidance, who participated in vicarious observational experiences and students who participated in direct observational experiences showed no statistically significant difference between mean achievement of understanding of concepts.

Conclusions and Implications

Because there was a statistically significant difference between the results of the two observation methods in The School in American Culture in favor of the vicarious observational experiences, and even though there were no statistically significant differences between the results of the two observation methods in Human Growth and Development and Educational Evaluation and Guidance, it seems reasonable to conclude further that:

1. Many of the problems associated with direct observations can be alleviated by use of appropriate audio-visual materials. Nevertheless, the accrediting agencies are currently placing emphasis on more extended direct observational practices in their standards for accreditation. Perhaps, more attention should be given to the types, quality, and quantity of audio-visual materials and facilities for their use in relation to observational opportunities. Such a change of emphasis would provide opportunities for students to observe many more educational situations which might increase both the depth and breadth of the understanding of conceptual principles. Such expansion of observational opportunities could greatly enhance the effectiveness of student-teaching experiences and, consequently, improve pre-service preparation of teachers in general.

2. Independent educational situational film sequences can be used as media for observational purposes with equal effectiveness with direct

observation methods. This has important implications for film production procedures. Traditionally, the general format of educational films has been patterned after the theatrical film with the usual formal introduction, background music, sequential content and continuity, and a unified theme designed to carry the film as a self-entity. The implication of the findings in this study is that it is feasible, for observational purposes, to produce simple, independent sequences which give a fuller treatment of separate concepts or concept-clusters with emphasis relating specifically to a particular conceptual principle.

Recommendations for Further Research

On the basis of the results of this investigation, the following recommendations for further study regarding observations of educational situations are suggested:

1. That a study be conducted in which a much larger population with a more varied background and a more diversified institutional setting would provide opportunities to test additional variables thought to affect achievement of understanding of concepts. Such a study would make it possible to arrive at more generalized conclusions than was possible in this study.
2. That further investigation be followed up in greater detail where two additional groups would be used: (a) a class where no observational experiences would be employed throughout the course and (b) a class where the students would be "saturated" with observational experiences, both vicarious and direct.
3. That further investigation be made in which: (a) students would make no observations of any kind; (b) students would be subjected to

maximum use of "film and slide sequences" related to each concept at the precise time of its consideration in class; and (c) students would view entire films related to each concept at the precise time of its consideration in class.

4. That a follow-up study be made of students who were involved in this study and who are now teaching in order to determine whether there is a difference in teaching performance between the teachers who participated in the different methods of observation at the pre-professional level.

5. That an extended study be made to refine further the separate concepts and concept-clusters which represent conceptual principles used in this study in relation to each of the basic foundation courses in professional education.

6. That predictive studies be made with the achievement tests used in this study and that adequate and representative norms be developed. If these tests were sufficiently standardized, they could be used extensively in determining the readiness and probable success of pre-service teachers in pursuing subsequent courses in professional education.

7. That this study be replicated with a larger sample representing a wider variety of teacher education programs in different types and sizes of teacher-education institutions.

APPENDIX I

ACHIEVEMENT TEST, EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE

1. True civic education should result in knowledge of citizenship in terms of
    (1) intellectual loyality.
    (2) current issues.
    (3) emotional patriotism.
    (4) political processes.

2. Transition in a democracy is seldom accompanied by
    (1) a change in value system and attitude.
    (2) a redistribution of wealth.
    (3) a decline in educational standards.
    (4) a more rigid class structure.

3. Teachers who posses a thorough knowledge of the social system should be more capable of
    (1) providing opportunities for immediate social mobility.
    (2) understanding the behavior, attitudes, and goals of students.
    (3) teaching a system of society that is free from stratification.
    (4) presenting the social system without personal bias.

4. Lower class parents are often anxious for their children to drop out of school because
    (1) their potential earnings are a supplement to the family.
    (2) schools tend to encourage dissatisfactions with the home.
    (3) they have traditional mistrust of learning by poor people.
    (4) they fear that their children will exceed their social level.

5. In order for democratic methods to work in the classroom the student must understand that he
    (1) has inalienable rights.
    (2) has responsibilities to the group.
    (3) accepts the teacher's veto power.
    (4) accepts the majority decisions.

6. Under the authoritarian concept of leadership, students are subordinate because teachers
    (1) have skills and knowledge the students need.
    (2) represent the parents.
    (3) demand students' respect as elders.
    (4) are certified by the state.

7. In a stable society with little controversy the school's tasks are teaching basic tools and transmitting
    (1) traditionally desirable customs.
    (2) its ideas of future trends.
    (3) the basic philosophy of any controversy.
    (4) the need for and the methods of securing changes.

8. Traditionally, which one of the following political concepts has NOT been a key factor in American culture?
    (1) trust in the intellectuals.
    (2) principle of isolationism.
    (3) faith in the integrity of public officials.
    (4) distrust of the military in civil government.

9. Conflict often arises between parents and children of foreign extraction because
    (1) children are naturally quick to notice differences in others.
    (2) ethnic groups tend to be traditional-orientated.
    (3) children are naturally cruel to the less fortunate.
    (4) standards of the peer group have a great influence.

10. The Jeffersonian concept of democratic education is BEST characterized by which one of the following statements?
   (1) free education through the secondary level for all people.
   (2) education in a democracy should be rectangular, i.e., have equalizing aspects.
   (3) free education should provide for the training of talented leaders.
   (4) tax supported schools should provide training for intelligent "followership."

11. The basic civic purpose of public education in America is to
   (1) teach the current body of practical knowledge.
   (2) develop skills which enable each citizen to earn a living.
   (3) develop persons committed to the tenets of democracy.
   (4) develop persons with cooperative national attitudes.

12. A signpost indicating a need for a change in the educational program is
   (1) anti-social attitude of youth.
   (2) a high rate of literacy.
   (3) increase in college enrollment.
   (4) a decline in drop out rate.

13. Public schools in a democracy are traditionally characterized by separation of church and state. The statement that is contrary to this principle is,
   (1) any church may have government support for buildings provided that they are fully accredited.
   (2) parents may send their children to public or church schools.
   (3) schools cannot teach religions only about the different religions.
   (4) states can aid with transportation individuals enrolled in church schools.

14. Traditionally, which one of the following has NOT been a key economic concept in American culture?
   (1) individualism
   (2) socialism
   (3) social responsibility
   (4) materialism

15. Teachers should have a knowledge of social stratification in order to
   (1) help students understand means of changing the social order.
   (2) help beter understand behavior, attitude, and goals of students.
   (3) know the barriers that exist in raising the social level of teachers.
   (4) help students rise above their present level of stratification.

16. A practical solution to the inequality of educational opportunity in rural areas is
   (1) higher salaries for rural teachers.
   (2) increased certification requirements.
   (3) more state aid per pupil for small schools.
   (4) district consolidation in the state.

17. Which one of the following processes BEST transmits the culture?
   (1) role playing
   (2) natural tendency to imitate
   (3) analysis of scientific knowledge
   (4) development of individuals

18. The Declaration of Independence eloquently stated that "all men are created equal." Which one of the following statements is NOT consistent with this principle?
(1) every student should be governed equally by the same moral standards.
(2) every student is due equal recognition for achievement.
(3) every student's differences should add to the enrichment of the school.
(4) Every student should be given equal grades based on ability.

19. In the formation of a value system which one of the following factors plays the MOST prominent part?
(1) understanding
(2) attitudes
(3) facts
(4) principles

20. Which one of the following factors is often a disadvantage of consolidation?
(1) qualification of teachers
(2) distance from school
(3) equipment available
(4) staff utilization

21. Human nature is
(1) biologically inherited and philosophically formed.
(2) biologically inherited and culturally learned.
(3) culturally learned and psychologically formed.
(4) culturally learned and sociologically formed.

22. In matters pertaining to control, methods, and materials the classroom teacher should reflect the
(1) laws of the state.
(2) authority of the administration.
(3) culture of the community.
(4) principle of academic freedom.

23. Educators must assume the responsibility for leadership in educational change. Which one of the following parts of a social foundation course in education would be most profitable for the teacher to study in acquiring leadership ability?
(1) welfare levels.
(2) structure of the community.
(3) federal aid to education.
(4) church, state, and school.

24. People who have "no roots," moving frequently in the course of a year from town to town, are commonly called transients. The principal factor causing them to move to a new location is usually
(1) economical.
(2) emotional.
(3) social.
(4) personal.

25. The problems created by mass education can be BEST solved by an increase in
(1) trade schools.
(2) college preparatory schools.
(3) municipal junior colleges.
(4) comprehensive schools.

26. Social anthropologists express one of the primary characteristics of American democracy as culturally
(1) pluralistic.
(2) unique.
(3) idealistic.
(4) dualistic.

27. An excellent background knowledge of history and philosophy of education enables the teacher to
(1) teach history and philosophy of education.
(2) assume the leadership role during educational change.
(3) acquire social and professional prestige as a result of status change.
(4) speak intelligently before community service organizations.

28. How an individual participates in the culture is influenced by
(1) the social position he occupies.
(2) mores of his groups.
(3) his educational background.
(4) cultural integration.

29. A comprehensive high school is BEST characterized by
(1) outstanding teachers and equipment.
(2) a variety of courses and levels of study.
(3) a high per cent of graduates in college.
(4) an excellent guidance clinic.

30. The American people respect religious beliefs. Which one of the following statements is contrary to this concept?
(1) private schools should be permitted under law.
(2) public schools should teach moral and spiritual values.
(3) public schools should be nondenominational.
(4) parochial schools should be rigorously regulated by the state.

31. Which one of the following goals has been accomplished if the process of education has been effective?
(1) a change in the behavior of students.
(2) all students have learned to read on an acceptable level.
(3) fifty per cent of the high school graduates go to college.
(4) an increase in academic achievement is indicated by tests.

32. The change in our culture has been a gradual process. Which one of the following phrases is NOT a reason for this gradual change?
(1) natural tendency to conform.
(2) satisfaction with status quo.
(3) fear of new ideas.
(4) aftermath of war and revolution.

33. Which one of the following factors related to a student is MOST affected by a school's organization, folkways, mores, and traditions?
(1) intellectual ability.
(2) mechanical aptitude.
(3) social status.
(4) emotional maturity.

34. The concept that the school plays a social role has been widely accepted in the last twenty years in educational circles. An example of this is that
(1) activities are considered as a part of the curriculum.
(2) teachers have become more professional in training.
(3) more high school graduates attend college today.
(4) science courses are receiving more emphasis.

35. Social problems brought up by students in the classroom can BEST be handled by the teacher in which one of the following ways?
(1) well organized and structured course of study.
(2) encourage the use of critical thinking in finding solutions.
(3) impose the teacher's opinion which is based on clear and rational thinking.
(4) allow students to debate the issues immediately in the classroom.

36. The system of public education in America is so well established that changes in the teaching methods are NOT required except when forced by
   (1) public sentiment.
   (2) pressure groups.
   (3) educational theory.
   (4) increased knowledge.

37. The tendency of the social class structure in the United States is toward
   (1) vertical mobility.
   (2) a rigidness of structure.
   (3) an increase in the upper class.
   (4) an increase in the lower class.

38. The content of the reading material for older students in a poverty stricken rural area should be
   (1) pastoral in nature, taken from classical literature.
   (2) about crops that enrich their diets and the soil.
   (3) about the advantages of the TVA program to farmers.
   (4) about the history of soil erosion and soil conservation.

39. A friendly and cooperative atmosphere in the classroom is essential in studying social problems in a critical and objective way. This atmosphere can be BEST developed
   (1) by studying man and his solutions to past social problems.
   (2) by the teacher providing opportunities for students to practice democracy.
   (3) through the observation of the democratic process in governmental operations.
   (4) by the teacher analyzing documentary films on social problems of the past.

40. The school attempts to develop the individual so that he can function best in his society. This creates problems due to
   (1) social change.
   (2) status quo nature.
   (3) laissez-faire methods.
   (4) home environment.

41. The major cause of problems in schools is due to
   (1) technological advancements.
   (2) social lag.
   (3) education for all.
   (4) population mobility.

42. Which one of the following statements concerning a class system in America is NOT true?
   (1) a person can rise above their environment in a class system.
   (2) the class system is flexible and open to some change.
   (3) the class system is complicated by ethnic groups.
   (4) none of these.

43. There have been some trouble outside of school between two racial groups that attend a teacher's school. Which one of the following actions should be the role of the teacher?
   (1) take sides after you determine the facts.
   (2) try to bring about agreement between the two groups.
   (3) keep out of the problem altogether.
   (4) contact the ministers of the religious groups involved.

44. In teaching moral and ethical values a school should
   (1) have general courses in religion taught by certified teachers.
   (2) offer courses in religion taught by clergymen.
   (3) permeate its teaching with these values.
   (4) delegate the responsibility to the church.

45. In the development of the mental discipline of problem solving the teacher should NOT

(1) illustrate the need for independent thinking since it is obvious.
(2) assume a leadership role in a discussion.
(3) impose personal viewpoints on students.
(4) contrast problem solving and other mental skills.

46. Which one of the following attitudes MUST the teacher have if he accepts the viewpoint that society is of a transitional character?

(1) truth is absolute not relative.
(2) one should achieve a provincial attitude towards conflict in belief.
(3) one should achieve a diagnostic attitude to locate factors of conflict.
(4) one should have a political philosophy that is pragmatic.

47. Which one of the following purposes is NOT a primary function of a social group?

(1) furnish immediate satisfaction of association with others.
(2) raise money for organizing new business enterprises.
(3) defend the rights of its members.
(4) help a group reinforce its beliefs.

48. Either in a poverty stricken or a prosperous rural area the curriculum should be based upon

(1) the needs of the students and the community.
(2) norms developed nationally from farm areas.
(3) the interests of the students.
(4) a vocational agriculture core.

49. The school must make a coordinated effort to achieve for its students a more wholesome life through education. This may be best accomplished by

(1) being impervious to religious and racial forces in the community.
(2) showing concern for prevention or re-education of juvenile delinquents.
(3) maintaining a role in the economic and social life of the community.
(4) having a laissez-faire attitude towards work of local churches.

50. The main reason for establishing a citizens' committee on education is that

(1) public schools have been attacked and the committee is needed.
(2) lay people are better informed on large problems that professional.
(3) lay people need a voice in school affairs.
(4) lay advisory committees' work is popular and practical.

51. The role of institutions in the United States must be defined in terms of their relation to

(1) community organizations.
(2) other institutions.
(3) individuals.
(4) the welfare state.

52. Which one of the following needs of youth would be ranked the highest by high school students?

(1) moral standards.
(2) vocational choice and placement.
(3) sex education.
(4) citizenship education.

53. Students can develop clear and rational minds to direct and to carry out the tasks of contemporary living by

(1) responsible participation in student government.
(2) intensive study of sociology.
(3) films depicting social changes in democracy.
(4) rote learning of the theory of problem solving.

54. The school is a part of the community. Which one of the following statements BEST illustrates this concept?

(1) part of the program of the school should be based on the needs of the students and the community.
(2) the local community should strive to meet standards set by the state.
(3) norms based on a nation-wide sample should be used as a guide for curriculum revision.
(4) the local board, an agent of the community, should be responsible for certification of teachers.

55. The primary motive of pressure groups is to act largely as

(1) constraining force or influence in our government.
(2) representatives of important group interests .
(3) propagandists.
(4) sounding board for public sentiment.

56; The inadequacy of education to help students improve their environment in a poverty stricken rural area points out the need for

(1) federal aid to all states.
(2) a nationally enforced curriculum.
(3) state accreditation for all schools.
(4) curriculum revision for the local school.

57. The philosophy of education that recognizes the principle of educational growth and development stresses the importance of

(1) time-allotment basis for school subjects.
(2) meeting needs of individuals and the social group.
(3) grade level and organization of classes.
(4) group rather than the individual.

58. Authorization for a citizens' committee on education should come from

(1) the school administration.
(2) Parent-Teacher Associations.
(3) the educational committee of the Chamber of Commerce.
(4) the board of education.

59. The teachers's task is to help the individual acquire new status. This can BEST be accomplished by helping the student

(1) develop self-confidence in his ability.
(2) refuse to accept defeat of any nature.
(3) feel dissatisfied with his home background.
(4) see the wisdom in a college preparatory course of study.

60. Which one of the following environmental factors has the MOST serious effect upon children from a marginal socio-economic level?

(1) increased rate of crime and delinquency.
(2) tendency to destroy self-confidence and aspirations.
(3) absence of books in the home makes education difficult.
(4) lack of adequate diet and protection from disease.

61. When the school's program is criticized by citizen groups, this may indicate that the school administration has failed to

(1) solicit the aid of laymen and teachers in planning the educational program.
(2) permit laymen to voice their dissatisfaction in public meetings.
(3) develop a public relations program to counteract bad publicity.
(4) revise the program based on the recommendations of the state department.

62. The goals of the school should be determined by

(1) the community.
(2) the state department of education.
(3) the board of education.
(4) school administration and teachers.

63. Middle-class parents are often anxious for their children to get an education because education

(1) is the vehicle for vertical mobility.
(2) develops the art of communication.
(3) by schools have replaced apprenticeships.
(4) eliminates the need to labor for a living.

64. The middle-class orientation of school is often NOT adapted to the needs of lower class students because teachers

(1) do NOT understand their interests or how to motivate them.
(2) do NOT have enough training in method courses.
(3) do NOT have enough training in their subject area.
(4) as a group are more mobile than other occupations.

65. Which one of the following statements about culture is NOT correct?

(1) there are universal patterns of culture.
(2) cultural changes occur slowly.
(3) the role of the school is to help preserve the culture.
(4) a study of culture develops religious sensitivity.

66. In discussions of controversial issues in their classrooms, teachers should encourage students to

(1) compare the editorial pages of papers and magazines.
(2) arrive at a conclusion after a thorough investigation.
(3) read current novels dealing with these issues.
(4) discuss the issues with peers and adults.

67. Which one of the following statements is NOT an indication that the American society is in an era of transition?

(1) decline of the local community to special interest groups.
(2) conflict between school and church.
(3) elimination of racial segregation.
(4) acceptance of traditional beliefs.

68. The main reason for the need of social and academic change in the American school is

(1) emphasis on material possessions.
(2) education for the masses.
(3) increased interest of lay citizens.
(4) rise of communistic controlled countries.

69. Membership in a social class is distinguished by a combination of factors. Which one of the following factors usually has the LEAST influence in determining one's social class?

(1) cultural background.
(2) biological characteristics.
(3) ethnic background.
(4) level of education.

70. The holding power of a school is often measured by the percentage of members of a freshman class that graduate four years later. The holding power is better determined by

(1) the percentage of students attending college.
(2) an analysis of reasons students leave before graduation.
(3) a curve plotted to show the average daily attendance.
(4) a comparison of a class' grade point average each year.

71. The teacher can prepare to handle controversial issues in the classroom by

(1) having a good understanding of social changes.
(2) exercising authoritarian leadership ability.
(3) allowing students to release their aggression by talking.
(4) having a good repertoire of jokes to release tensions.

72. As the local community declines as a unit of social organization, groups within the community are increasingly motivated to action from a sense of obligation to

(1) the community.
(2) self-contained moral principles.
(3) families.
(4) other associated groups.

73. Many students from lower socio-economic classes drop out of school because of academic reasons. Which one of the following statements BEST emphasizes this point?

(1) nothing fails more dismally than failure.
(2) success is the key to emotional stability.
(3) knowledge is the result of concentrated study.
(4) there is no excuse for failure to achieve.

74. The responsibility for educating immature members of our society rests primarily upon the

(1) school.
(2) families.
(3) community.
(4) state.

75. Classification of environmental factors as physical or cultural is differentiated by the

(1) moral philosophy of the community.
(2) source of creation.
(3) magnitude of size.
(4) intensity of population opinion.

76. Conflict between schools and other community agencies has been the result of

(1) jealousy on the part of school and other community agencies.
(2) the increase in the cost of public schools.
(3) the refusal to allow school buildings to be used by other agencies.
(4) unwilling acceptance of responsibility by community agencies.

77. Teachers MUST be well informed in subject matter specialities and

(1) encourage social integration among students.
(2) be cognizant of the controversies in education.
(3) engage in public discussion of political issues.
(4) be compassionate toward the deficient.

78. School districts in their effort to consolidate often meet with failure when the matter comes to an election by the citizens because

(1) consolidation is poorly planned and educationally unsound.
(2) the federal constitution warns against losing local control.
(3) the tax rate is lower in small districts.
(4) the public did not understand the advantages.

79. Which one of the following statements should be classified as a part of the physical, rather than the cultural environment?

(1) the meaning attached to objects.
(2) knowledge recorded in writing.
(3) the solar system in the universe.
(4) the institutions of mankind.

80. The American society is in an era of transition. Which one of the following phrases can NOT be classified as a result of transition?

(1) an increase in special interest groups.
(2) a conflict between school and other agencies.
(3) the failure of many schools to reorganize.
(4) the responsibility of rearing the family has shifted.

ACHIEVEMENT TEST, EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT

1. The learning curve is characterized as being

   (1) rectilinear.
   (2) a gradual slope.
   (3) normally distributed.
   (4) spurts and plateaus.

2. Which one of the following statements is contrary to generally accepted principles of growth and development?

   (1) The processes of physical growth are intercorrelated.
   (2) The order of development follows a certain pattern.
   (3) Growth tends to be positively correlated in different areas.
   (4) Growth is a complex process involving compensation.

3. In fairly homogeneous groups, the most accurate measure of central tendency is the

   (1) mode.
   (2) median.
   (3) mean.
   (4) range.

4. A teacher can best determine the nature of effective learning by children through

   (1) experimentation.
   (2) test results.
   (3) study of research.
   (4) classroom activities.

5. Which of the following defense mechanisms should often be encouraged?

   (1) Development of a special skill.
   (2) Attention getting.
   (3) Use of rationalization.
   (4) Sublimation of desires.

6. Feelings of anxiety

   (1) are not present in infants.
   (2) result from blocking of needs.
   (3) are prevented when physical needs are satisfied.
   (4) are evident in maladjusted.

7. The difference between feeblemindedness and genius is in

   (1) the primary mental abilities.
   (2) cultural differences.
   (3) achievement differences.
   (4) degree of mental abilities.

8. Feelings of depression are NOT usually caused by

   (1) loneliness.
   (2) guilt feelings.
   (3) insecurity.
   (4) acceptance.

9. To recognize and respond to certain properties in objects or situations and to disregard others is known as

   (1) association.
   (2) generalization.
   (3) concentration.
   (4) abstraction.

10. As a child grows older sex differences create differences in play interest due to

    (1) physiological differences.
    (2) anatomical differences.
    (3) cultural customs.
    (4) instinct.

11. The BEST technique in helping children overcome fears and worries is

    (1) to associate them with pleasantness and success.
    (2) to point out the absurdities of them.
    (3) to rationally explain the reasons for them.
    (4) to suggest a defense mechanism.

12. Which one of the following terms is NOT an association theory of learning?

    (1) Primacy.
    (2) Connection.
    (3) Field.
    (4) Behaviorism.

13. Which of the following statements BEST describes the play activities of the gifted when compared with dull children?

    (1) Similar in number, more individual and complex.
    (2) Greater in number, more social and complex.
    (3) Fewer in number, more sedentary and individual.
    (4) Fewer in number, more social and complex.

14. If a test measures what it claims to measure, it is said to be

    (1) normalized.
    (2) valid.
    (3) standardized.
    (4) reliable.

15. The development process is first general, gradually becoming specific because of expansion and specialization. This is BEST illustrated by

    (1) a child learning to crawl.
    (2) a child uttering babbling sounds before talking.
    (3) a child's first tooth.
    (4) individual growth of each child.

16. Children with superior intelligence are

    (1) always well developed physically.
    (2) rarely well developed physically.
    (3) usually well developed physically.
    (4) average in physical development.

17. In parallel play, preschool children

    (1) regard their playmates as play material.
    (2) always use the same play materials.
    (3) play beside but not with each other.
    (4) play in an unorganized fashion.

18. Human growth and development is interested with data from

    (1) all of the other sciences.
    (2) the social but not the biological sciences.
    (3) social and biological sciences.
    (4) physiology and anatomy.

19. Children can be greatly influenced by parents through the use of

    (1) persuasion.
    (2) authority.
    (3) affection.
    (4) rewards.

20. The most important and neglected phase of learning in high school and college is

    (1) abstract learning.
    (2) inductive reasoning.
    (3) perception formation.
    (4) concept formation.

21. A child's personality and behavior is affected by organic factors which are

    (1) reactions to hunger and pain.
    (2) determined by biological inheritance.
    (3) revealed by psychoanalysis.
    (4) socially and culturally learned.

22. The ability to single out particular elements from a total situation and to give them meaning is known as

    (1) conception.
    (2) perception.
    (3) abstraction.
    (4) generalization.

23. One of the weaknesses of the anecdotal record is that it

    (1) is usually written too long after the incident occurred.
    (2) has little meaning except to the writer.
    (3) may present biased picture.
    (4) cannot be statistically analyzed.

24. Longitudinal studies show that mental growth is most rapid during

    (1) early childhood.
    (2) middle childhood.
    (3) early adulthood.
    (4) adolescence.

25. An emotional experience affects largely

    (1) the digestive system.
    (2) the heart.
    (3) the entire body.
    (4) the endocrine glands.

26. In constructing a sociogram the teacher's purpose should be to discover

    (1) the most popular children.
    (2) the most cooperative children.
    (3) children's attitudes toward one another.
    (4) social deviates.

27. The amount of material, either rote or meaningful, which can be reproduced after a certain number of repetitions is known as the

    (1) transfer of learning.
    (2) memory span.
    (3) index of learning.
    (4) attention span.

28. Children of subnormal intelligence

    (1) like competitive games.
    (2) tend to play with younger children.
    (3) prefer humorous games.
    (4) have many hobbies and types of leisure-time activity.

29. When an average infant is two months old he will

    (1) stretch out hands toward adults.
    (2) strive for attention by movements.
    (3) offer an adult an object.
    (4) smile back at an adult.

30. The BEST way to control emotions is to

    (1) discuss them.
    (2) substitute other activities.
    (3) let them alone.
    (4) apply objective methods.

31. Which one of the following factors has the greatest effect on the language development of pre-school children?

    (1) Intelligence.
    (2) Organic defects.
    (3) Reading achievement.
    (4) Socio-economic status.

32. At birth all individuals have

    (1) the same mental potentiality.
    (2) the same number of brain cells.
    (3) no mental potentiality.
    (4) different mental potentiality.

33. The general interests of adolescents are

    (1) individual.
    (2) egotistic.
    (3) social.
    (4) idealistic.

34. The child of a dominating mother is usually

    (1) rebellious.
    (2) submissive.
    (3) a discipline problem.
    (4) selfish.

35. If a problem has produced fear in a child, the LEAST desirable way of dealing with the child is to

    (1) show that you are unafraid.
    (2) give verbal help.
    (3) condition by providing an experience.
    (4) recognize the fear.

36. The best way to develop desirable social attitudes is by

    (1) rewards.
    (2) example.
    (3) precept.
    (4) traits.

37. Emotions start in the individual during

    (1) prenatal development.
    (2) early infancy.
    (3) later infancy.
    (4) childhood.

38. Which one of the following situations would probably increase self-confidence in a child?

    (1) Assign difficult task with assurance that he is able.
    (2) Punish proportionately to the number of errors.
    (3) Gradually increase the difficulty of tasks.
    (4) Assign to a group of self-confident children.

39. Which one of the following educational terms is not one of the four fundamentals of learning?

    (1) Motivation.
    (2) Intelligence.
    (3) Response.
    (4) Stimulus.

40. Which one of the following learning theories is a basis of the field theory?

    (1) A change in perceptual organization.
    (2) A change in stimulus response connections.
    (3) Reinforcement as an essential conditioning to learning.
    (4) Learning occurs gradually and continually.

41. Which one of the following symptoms is the BEST reason why the adolescent struggles for freedom from strict parental supervision?

    (1) He is embarrassed among peers.
    (2) He resents being dependent.
    (3) He is mainly interested in social freedom.
    (4) He is following a normal pattern.

42. The most significant cause for physical under development is

    (1) improper ventilation.
    (2) malnutrition.
    (3) improper psychological conditions.
    (4) emotional strain.

43. Children in the primary grades like play activities which

    (1) have continuity.
    (2) are highly organized.
    (3) are merely repetitive.
    (4) are highly competitive.

44. The sequential pattern of development of walking and grasping in children indicates the importance of

    (1) learning.
    (2) maturation.
    (3) manipulation.
    (4) intelligence.

45. The process of conditioning in learning is

    (1) removal of stimulus.
    (2) substitution of stimulus.
    (3) transfer of stimulus.
    (4) modification of response.

46. Children inherit from parents their

    (1) potential for development.
    (2) pattern of behavior.
    (3) attitudes of interests.
    (4) limitations.

47. The pre-adolescent conduct tends to be controlled by

    (1) the mores of society.
    (2) spontaneous social groups.
    (3) home training.
    (4) rules of the school.

48. In meeting individual differences, the LEAST desirable method is

    (1) grade skipping.
    (2) rapid advancement.
    (3) homogeneous grouping.
    (4) enrichment of curriculum.

49. The intensive study of groups of individuals over a fairly long period of time represents the

    (1) cross-sectional approach.
    (2) clinical approach.
    (3) longitudinal approach.
    (4) anecdotal approach.

50. Normal physical development is desirable, but the school should realize that

    (1) academic learning and growth comes first.
    (2) it is the responsibility of the home.
    (3) the program should include more than athletics.
    (4) the attainment for all students is impossible.

51. The detailed case study is used primarily by

(1) the clinical psychologist.
(2) the experimental psychologist.
(3) the statistician.
(4) the teacher.

52. A child is mean to younger children. This problem can be BEST dealt with by

(1) punishment.
(2) explain that it is being a sissy.
(3) providing opportunity for aggression.
(4) ignoring acts when possible.

53. Children often have a fear of things or situations because they

(1) inherit the fear of the thing.
(2) have a habit of fear.
(3) were present when others experienced fear of the situation.
(4) have knowledge of the situation.

54. The pre-adolescent interprets his cultural environment in terms of

(1) what the school teaches.
(2) television and movie influences.
(3) established habits of thinking.
(4) the interpretation of parents.

55. Children in the same family differ considerably in size and intelligence. This illustrates the principle of

(1) maternity.
(2) mutation.
(3) variation.
(4) regression.

56. The essential condition for growth is

(1) motivation.
(2) scientific care.
(3) a good environment.
(4) lack of maturity.

57. Evidence concerning the relationship between age of reaching pubescence and intellectual growth, as measured by tests, indicates that

(1) those reaching pubescence early are retarded in intellectual growth.
(2) those reaching pubescence early have trailed in intellectual development up to that point, but from then on are accelerated.
(3) those who reach pubescence early tend to be superior in intelligence at all ages during the school years.
(4) no relationship exists at all.

58. Learning with understanding is better than rote learning because it is

(1) more permanent.
(2) more applicable to new problems.
(3) psychological.
(4) all of the above.

59. Transfer of training from one function to another would seem to take place by

(1) practice.
(2) perception.
(3) adequate drill.
(4) generalization.

60. Transfer of training

(1) is an automatic product of good teaching.
(2) should be a definite aim of teaching.
(3) should not affect educational planning.
(4) is BEST achieved through sensory aids.

61. Evidence seems to indicate that the impact of a highly stimulating environment on intellectual growth is MOST favorable

    (1) between the time of entering school and pubescence.
    (2) at the time of pubescence.
    (3) in the period immediately after high school graduation.
    (4) in the pre-school years.

62. The social adjustment of the intelligent child is likely to be

    (1) inferior to that of his less intelligent peers.
    (2) either equal to or superior to that of less gifted children.
    (3) either equal or inferior to that of less gifted children.
    (4) equal to that of the less intelligent children.

63. Exercise, repetition, or practice results in considerable learning when it is accompanied by

    (1) strong motivation.
    (2) recency.
    (3) conditioning.
    (4) effect.

64. Which of the following is most likely to lead to the presumption of male superiority? A study of

    (1) sex differences in intelligence.
    (2) memory ability.
    (3) the most eminent persons in Western culture.
    (4) differences in physical endurance.

65. The causes of psychosomatic disorders lie mainly in the individual's

    (1) heredity.
    (2) environment.
    (3) body structure.
    (4) emotional life.

66. The primary occasion for anger is

    (1) the thwarting of goal-seeking activity.
    (2) suffering from pain.
    (3) a tension-inducing situation.
    (4) feelings of hate.

67. The average growth in mental ability during adolescence as measured by the Stanford-Binet scale, shows

    (1) an accelerated period after pubescence is reached.
    (2) a slowing down of growth from 13 on.
    (3) great inconsistency in test results due to the stress of the period.
    (4) a pattern of equal intervals.

68. Defense mechanisms are ways to maintain self-esteem through

    (1) self-degradation.
    (2) public approval.
    (3) self-deception.
    (4) attention.

69. To be retained for a long period of time something must be

    (1) within the immediate memory span.
    (2) subject to redintegration.
    (3) studied intently.
    (4) overlearned.

70. A Boy Scout takes a 10-mile hike in order to win a merit badge. This is an example of

(1) extrinsic motivation.
(2) intrinsic motivation.
(3) goal-gradient.
(4) competition.

71. Strong effort to make up for failure or weakness in one activity through excelling in either a different or an allied activity is called

(1) substitution.
(2) sublimation.
(3) reaction-formation.
(4) compensation.

72. In terms of rate, mental ability will be found to grow most rapidly

(1) during early childhood.
(2) during middle childhood.
(3) just before pubescence.
(4) in late adolescence.

73. Learning accompanied by a satisfied feeling suggests the principal of

(1) readiness.
(2) effect.
(3) determination.
(4) use.

74. The factor that is LEAST important in affecting the amount of transfer of training is the

(1) attitude of the learner.
(2) intelligence of the learner.
(3) presence of identical elements.
(4) subject studied.

75. In sublimation, socially unacceptable motives are

(1) repressed.
(2) dissociated.
(3) expressed in a socially acceptable form.
(4) not allowed to reach consciousness.

76. The problems of retarded children usually are greatest for them

(1) in the home.
(2) in the elementary school.
(3) in the high school.
(4) during pre-adolescence.

77. Extensive practice is LESS important when the learner has

(1) motivation.
(2) confidence.
(3) interest.
(4) understanding.

78. Which one of the following groups shows the highest degree of positive correlation in intelligence?

(1) Siblings with each other.
(2) Children versus parents.
(3) Husbands and wives.
(4) Identical twins.

79. The MOST important factor in school learning is

(1) conditions of study.
(2) teaching techniques.
(3) ability.
(4) motivation.

80. Reward is more effective than punishment because it

(1) has more predictable results.
(2) is more permanent.
(3) is more meaningful.
(4) all of the above.

ACHIEVEMENT TEST, EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE

1. The particular advantage of a standardized reading test is that
   (1) it presents the same task to all pupils.
   (2) it permits a comparison with expected scores.
   (3) all reading tests give essentially the same information.
   (4) it contains national norms.

2. The anecdotal record and autobiography as techniques for collecting data have which one of the following points in common?
   (1) both deal with subjective data.
   (2) both are completely comprehensive in themselves.
   (3) both are reliable techniques.
   (4) data collected by both may be translated into objective scores easily.

3. Attitudes
   (1) are general rather than specific.
   (2) operate in specific behavior.
   (3) are a form of overt behavior.
   (4) are personality traits.

4. Which one of the following statements is NOT true about attitudes?
   (1) Attitudes of dependence usually result from experiences that begin in early childhood.
   (2) Racial prejudice as an attitude is determined by individual constitutional differences.
   (3) Attitudes are the result of environmental influences and our reactions to them.
   (4) Attitudes are strongly influenced in part by a person's physical constitution.

5. Which one of the following habits is most serious?
   (1) unsocialness
   (2) restlessness
   (3) whispering
   (4) smoking

6. It is probably a fact that
   (1) there are true and fundamental differences in people's capacities.
   (2) there are no deep-seated and permanent differences.
   (3) apparent differences are caused by differences in opportunity.
   (4) people only seem different in capacities.

7. The best means of determining socio-economic status of a child is
   (1) the multiple index method.
   (2) the autobiography.
   (3) the sociometric method.
   (4) not known.

8. The best definition of a curriculum is
   (1) the course of study adopted by a school.
   (2) all of the activities for which the school assumes responsibility.
   (3) any clubs which the school sponsors.
   (4) any learning experiences which a child may have.

9. High schools lag behind the elementary schools in reporting pupil progress because
   (1) parents are less interested in their children's progress.
   (2) grading in the high school continues as an accepted tradition.
   (3) high school is more competitive than elementary school.
   (4) grading becomes more complex.

10. One major advantage of teacher-made tests over standardized tests is
   (1) higher reliability.
   (2) easier scoring.
   (3) relation to objectives.
   (4) more personal.

11. The element regarded as the MOST important in keeping anecdotal records is
    (1) frequency with which record is made.
    (2) an adequate system of filing.
    (3) interpretation of incidents.
    (4) objectivity of the writer.

12. The major concern of educational evaluation should be
    (1) securing evaluation data on each student at regular intervals of time.
    (2) developing a longitudinal record of growth and development on each student.
    (3) classifying and challenging the student's attitudes and beliefs.
    (4) determining the activities students should pursue.

13. Which one of the following statements is false?
    (1) Continuity is a principle of evaluation.
    (2) Accurate information is a concern in evaluation.
    (3) Purposes are basic in evaluation.
    (4) Measurement is evaluation.

14. The properly kept cumulative record may be best described as a
    (1) permanent account of the child's school history.
    (2) longitudinal record of the child during his school years.
    (3) permanent record of the child which covers a long period of time.
    (4) record of elementary and senior high school work.

15. Personality may be best described as the
    (1) unique quality in an individual which impresses onlookers.
    (2) emotional and mental peculiarities of the individual.
    (3) customary, consistent modes of behavior of the individual.
    (4) reaction of one individual to another.

16. When reading investigations regarding intelligence, it is safest to assume that the word "intelligence" as used in these studies, refers to
    (1) that which the author of the test hoped the test would measure.
    (2) the perception of relations, especially the perception of difficult or subtle relations.
    (3) the ability to do abstract thinking.
    (4) the ability to adjust to the environment.

17. There is clear evidence that children who move from a poor environment to live in a better environment
    (1) show no increase in scores on intelligence tests.
    (2) show greater increase in intelligence scores if moved while younger.
    (3) show about the same increase in intelligence scores regardless of the age at which they change environment.
    (4) no agreement among studies on this topic.

18. An interest differs from an attitude in that an interest is
    (1) passive.
    (2) always positive.
    (3) constant.
    (4) learned.

19. A cumulative record is characterized by
    (1) statements of conditions which are observable.
    (2) record of information which has been kept over a long period of time.
    (3) consistencies and inconsistencies in one's behavior.
    (4) only factual knowledge about the student.

20. Which one of the following factors is LEAST effective in developing interest?
(1) clear, definite assignments.
(2) extensive student participation.
(3) extensive drill.
(4) audio-visual aids.

21. The degree to which a test measures what it proposes to measure is called
(1) validity.
(2) reliability.
(3) correction formula.
(4) correlation.

22. The teacher who obtains a sociogram by asking pupils whom they wish to work with should form groups
(1) to put together pupils who chose each other.
(2) to break up mutual-choice pairs and other cliques.
(3) on the basis of educational needs without regard to the sociometric results.
(4) to integrate social deviates.

23. The first step in the analysis of test scores is to
(1) compute a measure of variability.
(2) make a frequency distribution.
(3) compute the mean.
(4) calculate per cents.

24. A teacher should be aware that, in regard to a child's misbehavior,
(1) prompt punishment is important.
(2) the parents should be contacted at once.
(3) some children are just naturally bad and ignoring it is best.
(4) there is a cause for it.

25. Which one of the following tasks is NOT a developmental need of adolescence?
(1) developing satisfactory relationships with age-mates.
(2) establishing more mature relationships with adults.
(3) acquiring economic independence.
(4) achieving intellectual maturity.

26. Intelligence test scores are
(1) highly accurate in predicting student achievement.
(2) not highly accurate in predicting student achievement.
(3) not highly accurate, but useful in predicting student achievement.
(4) not accurate and should not be used in predicting achievement.

27. Which one of the following objectives should be the primary purpose of discipline?
(1) to keep the problem children from interfering with the learning experiences of other children.
(2) to help the individual get to the point where he will impose restrictions upon himself.
(3) to be severe with the rule-breakers now so they won't be so likely to wind up in correctional institutions later.
(4) to teach the children to obey the rules of society.

28. The MOST important single factor in explaining personality formation is
(1) the economic status of the family.
(2) the social status of the family.
(3) the age and amount of schooling of the parents.
(4) parental attitudes and family relations.

29. Which one of the following steps is the logical starting point to determine causes for a child's behavior?
(1) discussion with other teachers.
(2) evaluation of home relationships.
(3) question the student himself.
(4) evaluate the family's socio-economic status.

30. Intelligence tests assume that the subjects tested
    (1) have had fairly similar environments and opportunities.
    (2) have acquired the same kind and amount of information.
    (3) are of normal intelligence.
    (4) are of the same age.

31. The chief value of a building guidance committee is that it
    (1) provides specialists in child guidance.
    (2) insures speedier solution for problem cases.
    (3) can easily single out future problem cases.
    (4) provides for the continuous study of children.

32. Which one of the following is a description of guidance as a service?
    (1) counseling but not informational.
    (2) both assistance and dictation.
    (3) both information and counseling.
    (4) prescriptive but not descriptive.

33. Which one of the following practices is consistent with modern interpretations of transfer?
    (1) In-school activities should not be closely related to out-of-school activities.
    (2) Facts and information should be emphasized more than generalizations.
    (3) Teaching methods should be used which aid students to perceive relationships.
    (4) Adequate drill is necessary.

34. The correlation of a test with an external criterion is called
    (1) reliability coefficient.
    (2) validity index.
    (3) coefficient of stability.
    (4) coefficient of equivalence.

35. Which one of the following tasks is the major overall purpose of the evaluation and guidance program?
    (1) To assist the child in establishing the proper foundation that will lead to a satisfying personal and social adjustment.
    (2) To keep a record of his progress to determine his readiness for responsibility.
    (3) To help each child with his individual needs which are related to every aspect of school.
    (4) To improve all aspects of the curriculum.

36. Evaluation is a
    (1) division of educational measurements.
    (2) highly scientific improvement of measurement.
    (3) more inclusive concept than measurement.
    (4) responsibility of the administration.

37. In grouping students for work activities to establish a cooperative climate, which one of the following actions is NOT recommended?
    (1) Keep the groups small and flexible.
    (2) Put students with diverse interests in the same group.
    (3) Put students who are friendly with one another in the same group.
    (4) Help each group understand what it is working toward.

38. The MOST essential aspects of a good guidance program are
    (1) continuity and personalization.
    (2) comprehensiveness and continuity.
    (3) comprehensiveness and personalization.
    (4) personalized but group administered.

39. Which one of the following factors determines the goals of a group guidance situation?
   (1) the nature of the problem to be discussed.
   (2) the discretion of the guidance counselor.
   (3) the topics set by the administration.
   (4) the length of the period provided.

40. The reliability coefficient of a certain test is found to be +.95. This probably indicates that the test
   (1) does not measure what it proposes to measure.
   (2) has a consistent measurement of what it measures.
   (3) measures what it proposes to measure.
   (4) does none of the above.

41. An increased need for guidance and evaluation in high schools is emphasized by an increase in the
   (1) number of drop-outs.
   (2) high school populations.
   (3) number of problem cases.
   (4) number of guidance counselors.

42. The teacher will contribute MOST to the school's guidance program through
   (1) referral of students with developmental problems.
   (2) counseling students with severe adjustment problems.
   (3) creating success experiences for students in his class.
   (4) presenting occupational and educational information.

43. The MOST important techniques in evaluating learning progress are
   (1) standardized intelligence, achievement, and personality tests.
   (2) teacher-made essay and objective tests.
   (3) informal daily teacher-student appraisals.
   (4) to determine growth between pre-tests and post-tests.

44. Which is NOT a major characteristic of a standardized arithmetic achievement test?
   (1) High content validity
   (2) High reliability
   (3) Instructions are varied
   (4) Answers are objective

45. Which one of the following conditions BEST explains the need for evaluation and guidance programs?
   (1) Inability of modern youth to make decisions.
   (2) Lack of parental interest.
   (3) Increased variety of interests, activities, and curriculum.
   (4) Trend toward increased college enrollment.

46. Which one of the following questions is MOST useful for measuring ability to recall basic facts and to organize them into ideas?
   (1) What are the provisions of the Eighteenth Amendment?
   (2) How did tariff policies in the United States change from 1900 to 1950?
   (3) Which nations belong to the United Nations?
   (4) Name the ten imperative needs of youth.

47. Which one of the following tasks is the principal difference in guidance and evaluation between the secondary and elementary levels?
   (1) getting the student to accept himself.
   (2) providing specialized service for students.
   (3) providing for the majority of group needs through means of group guidance.
   (4) increasing the framework of the program.

48. At the present stage of measurements development, tests should be

(1) repudiated for school purposes.
(2) regarded as providing clues and approximations.
(3) regarded as providing precise data.
(4) accepted as reliable data.

49. Which one of the following tasks should be the major function of evaluation and guidance?

(1) Steer those of questionable ability away from college.
(2) Guarantee a complete school program.
(3) Develop ability and willingness to become increasingly self-sufficient.
(4) Make case studies of every child.

50. Which one of the following actions should be done to help promote self-efficiency in a child?

(1) Allow for a choice to be made.
(2) Allow for increased self-understanding.
(3) Help the individual face the consequences.
(4) All of the above.

51. Which one of the following guides is NOT recommended for evaluation?

(1) Evaluation procedures are related to objectives.
(2) Efficient learning requires continuous evaluation.
(3) Varied procedures and instruments are required.
(4) Evaluation focuses on comparative achievements of students.

52. Which one of the following is the MOST useful statistical technique for studying variability among various measures?

(1) percentiles
(2) standard deviation
(3) range
(4) average deviation

53. Group intelligence tests seem to

(1) be equally favorable to pupils of all classes.
(2) reward verbal facility.
(3) detect special abilities.
(4) have no relationship to social class.

54. Which one of the following guides is NOT suggested in developing questionnaires?

(1) Make sure the students know your purpose in securing information.
(2) Anticipate that students will respond with unequal frankness.
(3) Use the results obtained for grading.
(4) Submit the results to a statistical test.

55. Interest inventories measure frequency of

(1) expressed interests in a vocation.
(2) aptitudes as measured by interests.
(3) breadth of interests.
(4) the intensity of interests.

56. The first step in making an evaluation is to select the

(1) instruments for getting data.
(2) person or persons to make the evaluation.
(3) outcomes on behavior to be evaluated.
(4) statistical design for interpreting the evaluation.

57. The one objective which MOST definitely requires group activity is to

(1) read with understanding.
(2) express thoughts clearly in speaking.
(3) develop respect for others.
(4) communicate effectively.

58. The degree to which a test agrees with the teaching objectives is called the
(1) predictive validity.
(2) reliability coefficient.
(3) content validity.
(4) construct validity.

59. Which one of the following rules is NOT recommended for formulating multiple-choice items?
(1) Make all choices palusible.
(2) Give indirect clues to the correct choice.
(3) Present enough information within each choice to make it clear.
(4) Make only one choice correct.

60. Which one of the following concepts is NOT one of the essential foundations of interviewing?
(1) understanding
(2) acceptance
(3) identification
(4) rapport

61. The purpose of the sociodrama is to develop
(1) ability to project feelings.
(2) consciousness of social issues.
(3) extroversion.
(4) social understanding.

62. Which one of the following techniques is MOST helpful in planning the course of study?
(1) projective tests
(2) problem checklists
(3) anecdotal records
(4) questionnaires

63. Which one of the following techniques is MOST difficult for the classroom teacher to interpret soundly?
(1) Guess Who
(2) Sociogram
(3) Observation of incidents
(4) Self-report

64. Which one of the following types is generally considered the LEAST valid of all types of standardized tests?
(1) achievement test
(2) personality test
(3) intelligence test
(4) special aptitude test

65. A productive approach to interest is to
(1) provide a rapid succession of varied events.
(2) construct entertaining class activities.
(3) relate activities to the goals which pupils recognize and accept.
(4) see that every pupil is constantly challenged.

66. Which one of the following methods is NOT recommended in helping students realize their own progress?
(1) Teacher-made tests at the beginning and end of a unit.
(2) Individual progress charts kept by each student.
(3) Individual progress charts posted on the bulletin board.
(4) Interpretation of standardized test scores.

67. Sociometry is
(1) the measurement of the results of sociodrama.
(2) a way of measuring the status of a racial or ethnic group.
(3) a method for mapping group structure.
(4) useful only when the group has a formal organization.

68. A teacher can obtain the MOST complete information for guidance purposes from which one of the following techniques?
(1) interview
(2) daily class schedule
(3) case study
(4) observation

69. The MOST effective way for teachers to learn about the function of socio-economic status is to
(1) read more widely.
(2) study cultural anthropology.
(3) reminisce on their own childhood experiences.
(4) participate more widely in community affairs.

70. Standardized and teacher-made tests are LEAST useful for appraising
(1) achievement in subject-matter areas.
(2) skills in subject-matter areas.
(3) motivation.
(4) level of ability.

71. When planning a long-range program of mental hygiene, major emphasis should
(1) provide corrective measures.
(2) provide positive steps for developing desirable mental health habits.
(3) constitute a complete and systematic testing program.
(4) be placed on the ability of the staff.

72. Play therapy is utilized for the purpose of
(1) discovering the underlying causes for the child's behavior.
(2) giving the child a medium to express his feelings.
(3) depth analysis of a child's play reactions.
(4) delineating the causes of problems.

73. Class discussion is needed MOST in
(1) planning a class project.
(2) deciding individual reports to be given.
(3) improving written composition skills.
(4) making an assignment.

74. Which one of the following activities is NOT part of an effective guidance program?
(1) Services based on the needs and problems of children.
(2) Teachers handling all but extreme discipline cases.
(3) The teacher referring all problems to the guidance counselor.
(4) The support of the school administration.

75. The function of intelligence tests is to
(1) measure innate capacity.
(2) indicate the level of academic achievement.
(3) indicate the future development of the testee.
(4) estimate the existence of capacity through present status.

76. The major purpose of evaluation is to determine
(1) how well assignments have been mastered.
(2) how well purposes sought are being achieved.
(3) how a pupil rates when compared with the rest of the class.
(4) the degree of academic achievement.

77. The interview is MOST questionable as a technique
(1) for a situation requiring a standardized procedure.
(2) to obtain information.
(3) to impart information.
(4) to help find the solution to a problem.

78. The amount a given score may deviate from the central tendency is called the
(1) standard score.
(2) percentile rank.
(3) raw score.
(4) range of scores.

79. Which one of the following characteristics is BEST suited to a good evaluation and guidance program at any level?

(1) helping the individual develop skills already begun.
(2) achievement of emotional maturity.
(3) assisting the development of social adjustment.
(4) providing a classroom atmosphere that is conducive to good mental health.

80. "Guess Who" techniques may be used from the kindergarten through

(1) third grade.
(2) eighth grade.
(3) twelfth grade.
(4) adult groups.

APPENDIX II

LIST OF FILMS PREVIEWED WITH NAMES AND ADDRESSES OF PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS, EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE

TITLES OF FILMS	PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS
Tale of Two Towns	Agrafilm, Inc. Athens, Georgia
Brotherhood of Man Place to Live	Brandon Films, Inc. 200 West 57th St. New York 19, New York
Does It Matter What You Think	British Information Service 30 Rockefeller Plaza New York 20, New York
All God's Children Link In a Chain	Christophers, Inc. 18 East 48th St. New York 17, New York
Capitalism Community Governments: How They Function Discussion in Democracy Education In America: 17th & 18th Century Education In America: 19th Century Education In America: 20th Century Family Life Using Scientific Method Who Are The American People	Coronet Films Coronet Building Chicago 1, Illinois
Backward Civilization Belonging To The Group The Bill of Rights of the U.S.A. Cities: How They Grow Defining Democracy Democracy Growth of Cities Horace Mann Man and His Culture Pressure Groups The Teacher	Encyclopaedia Britannica Films, Inc. 1150 Wilmette Avenue Wilmette, Illinois
Education is Good Business	General Pictures Producers 1621 6th Ave. Des Moines, Iowa
Boundary Lines Near Home	International Film Bureau 57 E. Jackson Blvd. Chicago 4, Illinois
Sixth Chair	The Jam Handy Organization 2821 East Grand Blvd. Detroit 11, Michigan

TITLES OF FILMS	PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS
Teaching	Carl F Mahnke Productions 215 East 3rd St. Des Moines, Iowa
Americans All: United States Broader Concepts and Methods: Part I (Developing Pupil Interest) Broader Concepts and Methods: Part II (Teacher and Pupil Planning and Working Together) Design of American Public Education Fight For Better Schools High Wall Learning to Understand Children: Part I (A Diagnostic Approach) Learning to Understand Children: Part II (A Remedial Approach) Learning Through Cooperative Planning Maintaining Classroom Discipline Our Changing Family Life Problems of Pupil Adjustment: Part I (The Drop Out) Problems of Pupil Adjustment: Part II (The Stay In) School and the Community Schools March On Social Class in America Who Will Teach Your Child	McGraw-Hill Book Company, Inc. 330 West Forty-Second Street New York 36, New York
And Gladly Teach Assignment Tomorrow Challenge A Desk For Billie Freedom To Learn How Good Are Our Schools (Dr. Conant Reports) No Teacher Alone Not By Chance School Boards in Action Schools in Centerville Section Sixteen Secure the Blessing What Greater Gift	National Education Association 1201 16th St., N.W., Washington 6, D.C.
Families First	New York State Department of Commerce Albany, New York
And So They Live	New York University Washington Square New York 3, New York

TITLES OF FILMS	PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS
Torchbearers of Tomorrow	Oklahoma Education Association 323 East Madison Oklahoma City 3, Oklahoma
Who Is Delinquent	Radio Pictures Inc. 1270 Avenue of the Americas New York 20, New York
U.S. Community and Its People	United World Films 1445 Park Ave. New York 29, New York
Principles of The Art and Science of Teaching	University of Iowa Bureau of Visual Instruction Iowa City, Iowa
School: The Child's Community	Wayne State University Audio-Visual Materials Consultation Bureau Detroit 9, Mich.

LIST OF FILMS PREVIEWED WITH NAMES AND ADDRESSES OR PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS, EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT

TITLES OF FILMS	PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS
They Grow Up So Fast	The American Association of Health, Physical Education and Recreation 1201 Sixteenth Street, N.W. Washington 6, D.C.
Fundamental Skills in a Unit of Work	Bailey Films, Inc. 6509 DeLongpre Ave. Hollywood 28, Calif.
The Three A's Your Child's Ears	British Information Service 30 Rockefeller Plaza New York 20, New York
Act Your Age Are You Popular Control Your Emotions Developing Your Character Feeling Left Out Good Sportsmanship Heredity and Environment Improving Your Personality Making the Most of School Overcoming Fears Overcoming Worry Planning for Success School Rules: How They Help Us School Spirit and Sportsmanship Self-Conscious Guy Shy Guy Snap Out of It Understand Your Emotions Understanding Your Ideals We Go To School	Coronet Films Coronet Building Chicago 1, Illinois
Answering The Child's Whys Baby's Day at 48 Weeks Baby's Day at 12 Weeks Behavior Patterns at One Year Biography of The Unborn Early Social Behavior Endocrine Glands From Creeping to Walking Growing Girls Helping The Child Face The Don'ts Helping The Child Face The Do's Heredity Learning and Growth Mental Health Personality and Emotions Thirty-Six Weeks Behavior Day	Encyclopaedia Britannica Films, Inc. 1150 Wilmett Ave. Wilmette, Illinois

TITLES OF FILMS	PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS
Testing Intelligence With The Stanford Benet	Indiana University Bloomington, Indiana
Angry Boy Fears of Children They All Learn to Read Who is Sylvia	International Film Bureau 57 E. Jackson Blvd. Chicago 4, Illinois
Finding The Right Job Finding Your Life's Work	Carl F. Mahnke Productions 215 East 3rd St. Des Moines, Iowa
Age of Turmoil Childrens Emotions Children's Fantasies Children's Play Conflict Curriculum Based on Child Development Developmental Characteristics of Pre-Adolescents Discovering Individual Differences Each Child is Different Emotional Health Emotional Maturity Endocrine Glands, How They Affect Us Feelings of Depression Feelings of Hostility Feelings of Rejection From Sociable Six to Noisy Nine From Ten to Twelve Frustrating Fours and Fascinating Fives Good Speech for Gary Guiding The Growth of Children He Acts His Age Human Reproduction Importance of Goals Individual Differences It Takes All Kinds Learning: Controlling Behavior Through Reinforcement Learning: Learning Discrimination and Skills Learning: Reinforcement in Learning and Extinction Learning to Understand Children Life With Baby Maintaining Classroom Discipline Making Learning More Meaningful Meaning of Adolescence	McGraw-Hill Book Company, Inc. 330 West Forty-Second St. New York 36, New York

TITLES OF FILMS	PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS
Meeting The Needs of Adolescents Motivating The Class Perception Physical Aspects of Puberty Principles of Development Social Acceptability Social Development Social Sex Attitudes in Adolescents Teens Terrible Two's and Trusting Three's	
Balloons: Agression and Distruction Games Diagnosis of Childhood Schizophrenia Meeting Emotional Needs of Children: The Groundwork of Democracy This Is Robert	New York University Washington Square New York 3, New York
Accent on Learning Problem Children	Ohio State University Teaching Aids Laboratory Columbus, Ohio
Adventures in Maturity Anger at Work Mental Hospitals Public Health Nurse and The Retarded Child Retire to Life Target Tooth Decay	University of Oklahoma Motion Picture Production Unit Norman, Oklahoma
Motivation and Reward in Learning Motor Conditioning in Dogs	Pennsylvania State University Audio-Visual Aids Library State College, Pennsylvania
Why Jimmy Can't Read	Syracuse University Audio-Visual Center Syracuse, New York
Willie and The Mouse	Teaching Films Custodians 25 West 43rd St. New York 18, New York
Characteristics of Core Curriculum We Plan Together	University of Colorado Boulder, Colorado
Human Growth	University of Oregon Medical School Eugene, Oregon
In The Beginning	United States Department of Agriculture Motion Picture Service Washington 25, D.C.

LIST OF FILMS PREVIEWED WITH NAMES AND ADDRESSES OF PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS, EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE

TITLES OF FILMS	PRINCIPAL DISTRIBUTORS AND/OR PRODUCERS
Mechanical Aptitudes	Coronet Films Coronet Building Chicago 1, Illinois
Defining Democracy Practicing Democracy in The Classroom	Encyclopaedia Britannica Films, Inc. 1150 Wilmett Avenue Wilmette, Illinois
They All Learn To Read	International Film Bureau 57 E. Jackson Blvd. Chicago 4, Illinois
Counseling - Its Tools and Techniques	Carl F Mahnke Productions 215 East 3rd St. Des Moines, Iowa
A Counselor's Day Curriculum Based on Child Development Diagnosis and Planning Adjustment in Counseling Discovering Individual Differences Guiding the Growth of Children Learning to Understand Children Meaning of Adolescence Meeting the Needs of Adolescents Promoting Pupil Adjustment Using Analytical Tools	McGraw-Hill Book Company, Inc. 330 West Forty-Second Street New York 36, New York
Mike Makes His Mark Skippy and The Three R's	National Education Association 1201 16th St., N.W. Washington 6, D.C.
Meeting Emotional Needs of Childhood: The Groundwork of Democracy	New York University Washington Square New York 3, New York
Problem Children	Ohio State University Teaching Aids Laboratory 1988 North College Road Columbus 10, Ohio
Why Can't Jimmy Read	Syracuse University Audio-Visual Center Syracuse, New York

APPENDIX III

DECILE FREQUENCY AND PERCENTAGE DISTRIBUTIONS OF OHIO STATE PSYCHOLOGICAL EXAMINATION, FORM 23, AND IOWA HIGH SCHOOL CONTENT EXAMINATION SCORES, EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE

	O S P E				I H S C									
Decile	Reading		Total		English		Math		Science		History		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Observational Experience, Teacher 1 (N = 27)														
0	2	7	1	4	4	15	4	15	3	11	1	4	0	0
9	3	11	1	4	5	19	1	4	2	7	0	0	6	22
8	1	4	6	22	4	15	3	11	1	4	3	11	1	4
7	3	11	2	7	4	15	4	15	1	4	4	15	4	15
6	4	15	3	11	2	7	1	4	6	22	2	7	1	4
5	3	11	6	22	2	7	6	22	4	15	3	11	3	11
4	2	7	3	11	0	0	2	7	3	11	3	11	4	15
3	3	11	0	0	3	11	2	7	2	7	2	7	4	15
2	4	15	2	7	1	4	4	15	0	0	3	11	0	0
1	2	7	3	11	2	7	0	0	5	19	6	22	4	15
Vicarious Experience, Teacher 1 (N = 25)														
0	3	12	3	12	2	8	4	16	5	20	2	8	2	8
9	2	8	2	8	5	20	1	4	2	8	0	0	2	8
8	3	12	0	0	1	4	2	8	0	0	3	12	3	12
7	3	12	4	16	3	12	3	12	3	12	2	8	1	4
6	1	4	4	16	2	8	3	12	0	0	2	8	1	4
5	1	4	3	12	3	12	3	12	1	4	4	16	4	16
4	1	4	2	8	0	0	3	12	2	8	2	8	4	16
3	3	12	3	12	6	24	1	4	4	16	0	0	1	4
2	6	24	3	12	2	8	2	8	5	20	4	16	3	12
1	2	8	1	4	1	4	3	12	3	12	6	24	4	16
Direct Observational Experience, Teacher 2 (N = 27)														
0	2	7	2	7	7	26	2	7	2	7	2	7	2	7
9	0	0	2	7	5	19	2	7	0	0	1	4	2	7
8	4	15	1	4	2	7	4	15	1	4	4	15	3	11
7	2	7	2	7	2	7	1	4	1	4	0	0	1	4
6	3	11	6	22	3	11	3	11	5	19	0	0	1	4
5	3	11	5	19	2	7	4	15	4	15	4	15	1	4
4	3	11	1	4	1	4	0	0	3	11	2	7	3	11
3	6	22	2	7	4	15	2	7	1	4	5	19	8	30
2	1	4	4	15	0	0	6	22	7	26	2	7	4	15
1	3	11	2	7	1	4	3	11	4	15	7	26	2	7
Vicarious Experience, Teacher 2 (N = 29)														
0	3	10	3	10	10	35	2	7	3	10	1	3	4	14
9	2	7	1	3	2	7	2	7	3	10	2	7	3	10
8	2	7	4	14	3	10	4	14	1	3	5	17	2	7
7	2	7	3	10	2	7	1	3	3	10	5	17	2	7
6	1	3	1	3	2	7	4	14	1	3	6	21	3	10
5	4	14	4	14	4	14	3	10	2	7	2	7	3	10
4	0	0	2	7	3	10	0	[illegible]	6	21	1	3	4	14
3	6	21	3	10	1	3	4	14	2	7	0	0	2	7
2	8	28	7	24	1	3	4	14	5	17	3	10	1	3
1	1	3	1	3	1	3	5	17	3	10	4	14	5	17

DECILE FREQUENCY AND PERCENTAGE DISTRIBUTIONS OF OHIO STATE PSYCHOLOGICAL EXAMINATION, FORM 23, AND IOWA HIGH SCHOOL CONTENT EXAMINATION SCORES, EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT

Decile	OSPE				IHSC									
	Reading		Total		English		Math		Science		History		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Observational Experience, Teacher 1 (N = 21)														
0	2	10	2	10	0	0	0	0	2	10	0	0	0	0
9	4	19	4	19	4	19	2	10	3	14	2	10	2	10
8	3	14	3	14	5	24	2	10	3	14	1	5	3	14
7	1	5	3	14	3	14	3	14	3	14	2	10	4	19
6	4	19	1	5	2	10	2	10	1	5	1	5	4	19
5	1	5	2	10	3	14	4	19	0	0	4	19	3	14
4	1	5	2	10	2	10	3	14	0	0	6	29	0	0
3	3	14	1	5	1	5	1	5	2	10	3	14	2	10
2	2	10	3	14	1	5	3	14	4	19	2	10	2	10
1	0	0	0	0	0	0	1	5	3	14	0	0	1	5
Vicarious Experience, Teacher 1 (N = 21)														
0	0	0	0	0	5	24	2	10	2	10	1	5	2	10
9	2	10	3	14	4	19	6	29	3	14	0	0	1	5
8	6	29	4	19	2	10	1	5	2	10	2	10	3	14
7	3	14	3	14	2	10	3	14	1	5	2	10	2	10
6	2	10	4	19	3	14	1	5	4	19	4	19	5	24
5	2	10	1	5	2	10	1	5	3	14	4	19	2	10
4	2	10	2	10	1	5	0	0	1	5	1	5	1	5
3	3	14	2	10	1	5	2	10	2	10	1	5	2	10
2	0	0	2	10	1	5	4	19	1	5	1	5	2	10
1	1	5	0	0	0	0	1	5	2	10	5	24	1	5
Direct Observational Experience, Teacher 2 (N = 20)														
0	0	0	0	0	2	10	1	5	0	0	1	5	0	0
9	3	15	2	10	3	15	0	0	1	5	1	5	2	10
8	1	5	2	10	2	10	2	10	2	10	0	0	2	10
7	1	5	0	0	2	10	1	5	2	10	2	10	0	0
6	3	15	2	10	2	10	0	0	4	20	1	5	2	10
5	4	20	4	20	2	10	4	20	1	5	1	5	3	15
4	1	5	2	10	2	10	2	10	2	10	2	10	0	0
3	1	5	2	10	1	5	3	15	0	0	4	20	4	20
2	4	20	4	20	2	10	5	25	3	15	3	15	2	10
1	2	10	2	10	2	10	2	10	5	25	5	25	5	25
Vicarious Experience, Teacher 2 (N = 21)														
0	0	0	1	5	2	10	1	5	1	5	0	0	0	0
9	1	5	0	0	3	14	0	0	1	5	1	5	2	10
8	1	5	0	0	2	10	0	0	2	10	0	0	1	5
7	3	14	4	19	5	24	2	10	0	0	3	14	0	0
6	0	0	3	14	1	5	2	10	3	14	0	0	1	5
5	5	24	2	10	3	14	6	29	3	14	2	10	5	24
4	5	24	2	10	2	10	4	19	2	10	5	24	4	19
3	1	5	5	24	3	14	1	5	1	5	4	19	4	19
2	3	14	3	14	0	0	4	19	6	29	3	14	3	14
1	2	10	1	5	0	0	1	5	2	10	3	14	1	5

DECILE FREQUENCY AND PERCENTAGE DISTRIBUTIONS OF OHIO STATE PSYCHOLOGICAL EXAMINATION, FORM 23, AND IOWA HIGH SCHOOL CONTENT EXAMINATION SCORES, EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE

	OSPE				IHSC									
Decile	Reading		Total		English		Math		Science		History		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Direct Observational Experience, Teacher 1 (N = 28)														
0	2	7	1	4	2	7	5	18	1	4	0	0	2	7
9	3	11	4	14	5	18	4	14	1	4	0	0	1	4
8	6	21	6	21	6	21	3	11	1	4	5	18	1	4
7	2	7	3	11	6	21	2	7	2	7	0	0	4	14
6	0	0	1	4	2	7	0	0	3	11	2	7	5	18
5	7	25	6	21	2	7	3	11	3	11	4	14	3	11
4	3	11	2	7	1	4	3	11	5	18	5	18	3	11
3	2	7	4	14	2	7	1	4	3	11	3	11	4	14
2	2	7	0	0	1	4	4	14	4	14	1	4	1	4
1	1	4	1	4	2	7	3	11	5	18	8	28	4	14
Vicarious Experience, Teacher, 1 (N = 25)														
0	1	4	1	4	4	16	3	12	2	8	0	0	1	4
9	1	4	2	8	2	8	2	8	2	8	3	12	3	12
8	2	8	0	0	1	4	2	8	1	4	2	8	1	4
7	3	12	4	16	3	12	1	4	3	12	4	16	3	12
6	6	24	5	20	1	4	1	4	2	8	2	8	2	12
5	3	12	3	12	4	16	5	20	1	4	3	12	0	0
4	2	8	4	16	2	8	2	8	2	8	2	8	2	8
3	4	16	1	4	5	20	2	8	1	4	3	12	5	20
2	2	8	3	12	1	4	5	20	10	40	1	4	5	20
1	1	4	2	82	2	8	2	8	1	4	5	20	2	8
Direct Observational Experience, Teacher 2 (N = 23)														
0	1	4	1	4	4	17	3	13	2	9	1	4	1	4
9	3	13	2	9	4	17	1	4	1	4	2	9	1	4
8	1	4	3	13	5	22	3	13	2	9	1	4	2	9
7	1	4	2	9	1	4	0	0	1	4	2	9	4	17
6	3	13	5	22	1	4	1	4	1	4	4	17	2	9
5	5	22	3	13	2	9	3	13	3	13	4	17	2	9
4	5	22	1	4	0	0	1	4	3	13	2	9	2	9
3	1	4	3	13	5	22	1	4	2	9	1	4	2	9
2	2	9	1	4	1	4	4	17	6	26	3	13	2	9
1	1	4	2	9	0	0	6	26	2	9	4	17	5	22
Vicarious Experience, Teacher 2 (N = 20)														
0	2	10	3	15	3	15	1	5	2	10	2	10	1	5
9	4	20	3	15	4	20	2	10	2	10	0	0	3	15
8	2	10	2	10	2	10	3	15	4	20	1	5	1	5
7	2	10	1	5	2	10	0	0	2	10	4	20	4	20
6	1	5	3	15	1	5	3	15	1	5	0	0	1	5
5	4	20	1	5	2	10	3	15	3	15	2	10	1	5
4	1	5	1	5	1	5	0	0	0	0	3	15	2	10
3	1	5	2	10	1	5	4	20	0	0	4	20	4	20
2	3	15	4	20	4	20	2	10	3	15	3	15	2	10
1	0	0	0	0	0	0	2	10	3	15	1	5	1	5

FREQUENCY DISTRIBUTION OF THE UNIVERSITY OF OKLAHOMA MATHEMATICS PLACEMENT EXAMINATION RAW SCORES FOR ENTERING FRESHMEN

Method, Course and Teacher	Raw Scores																																								N	Mean	S.D.
	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
$I_1J_1K_1$											1		1		1	3	1				1	1	1	2	1	1	1	1	2	2		2	2	2	1							27	16.00	7.100
$I_2J_1K_1$				1				1										1		1	1	1	1		1	1	2		1		2	1	4	2		1		1	1		1	25	13.03	8.777
$I_2J_1K_2$				1							2									1	1			1		4		1	3	2	2	3	1	2		4	1					29	13.07	7.800
$I_1J_1K_2$															2	1					1		2	4	1		1	1	2	1	1		1	4	1	1	2		1			27	12.81	6.759
$I_2J_2K_1$											1	1			1	1	2	1					2	1		2	1		2	1	2	1	1				1					21	16.86	7.267
$I_1J_2K_1$													1	1				2			1		3			1	2	1	1	1		1	2	1		1	1	1				21	14.19	7.148
$I_2J_2K_2$												1	1						1	2			1				2				4	4	1		2			2				21	12.81	7.367
$I_1J_2K_2$																1	1						1		1			2	1	1	3	3	2	3		1						20	11.55	5.285
$I_1J_3K_1$							2						2		1	2	2			1	1		1	1	2	1	1	2			3	2			2	1			1			28	17.07	8.631
$I_2J_3K_1$										1						2	1		1		1	1	1		2	2	1	1		1	4	1	2			2			1			25	14.44	7.360
$I_1J_3K_2$												1		1			2		2	1			1		1	2	1		1	1	1		2	2		1	3					23	14.22	7.723
$I_2J_3K_2$													1				1	1			1	2			1	1		1	2	2		1	1	2	1		2					20	13.40	6.746

I = Method
  I_1 = Direct Observational Experience
  I_2 = Vicarious Experience
K = Course
  K_1 = Education 52 - The School in American Culture
  K_2 = Education 151 - Human Growth and Development
  K_3 = Education 222 - Educational Evaluation and Guidance
J = Teacher
  J_1 = Teacher 1
  J_2 = Teacher 2

APPENDIX IV

DIRECT OBSERVATIONAL EXPERIENCE
EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE, TEACHER 1
(N = 41)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
47.7	47	49	39	31	27	46
47.7	47	49	54	28	24	44
41.9	41	56	43	26	23	34
52.3	49	59	49	42	25	47
60.3	56	60	56	38	21	59
55.5	55	60	44	48	24	52
45.1	51	51	55	44	18	37
52.1	50	52	57	51	21	47
45.5	42	42	64	30	20	41
46.7	45	59	47	35	18	39
54.6	60	60	57	35	28	50
47.4	51	45	42	45	29	45
44.2	34	45	39	47	24	40
49.2	51	49	51	35	19	46
43.0	41	42	38	32	20	41
44.1	32	54	52	33	17	36
53.8	52	51	63	35	19	51
35.6	34	35	39	26	23	32
46.7	49	55	58	33	20	39
49.4	50	45	55	54	15	45
54.6	68	62	51	37	22	50
48.2	45	45	56	36	28	45
57.9	53	65	49	42	25	54
50.2	55	48	49	39	24	48
51.0	49	48	68	32	18	47
48.4	54	46	51	51	18	44
54.6	50	65	56	47	33	47
49.0	51	54	51	43	28	43
50.6	53	55	51	37	24	46
55.1	54	54	45	43	14	54
44.3	44	42	45	41	32	41
50.9	49	59	73	24	21	43
53.8	54	62	51	26	22	50
50.0	50	54	57	40	15	44
48.8	43	48	49	37	34	46
43.6	32	44	63	34	23	37
45.2	41	39	51	28	18	44
59.1	60	60	73	33	26	55
50.0	56	56	56	44	26	43
60.6	62	66	49	34	19	59
45.8	42	49	49	34	19	41

VICARIOUS EXPERIENCE
EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE, TEACHER 1
(N = 41)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
47.1	57	49	46	48	46	42
45.0	45	45	40	31	30	43
60.0	60	71	68	27	26	54
39.0	36	39	46	25	20	35
46.0	58	42	42	43	22	44
49.0	52	54	46	41	23	44
50.1	53	55	46	27	24	46
52.2	62	51	46	36	25	51
49.9	56	51	43	33	20	48
53.8	55	62	57	34	24	48
50.6	42	52	46	36	23	48
38.0	38	45	27	27	22	34
43.4	43	45	52	43	26	37
50.3	55	56	55	32	27	45
51.7	44	55	41	41	23	49
41.8	47	39	47	38	18	38
47.4	49	52	45	26	21	44
38.6	38	44	54	27	26	31
57.0	62	59	52	35	24	55
53.1	52	54	57	32	15	50
36.0	31	42	46	36	17	29
51.6	50	55	68	27	22	46
38.8	45	55	46	42	24	27
63.5	62	78	56	44	20	57
40.9	45	49	47	37	19	33
50.7	51	54	55	39	24	46
46.3	51	46	43	42	24	43
44.9	43	46	60	33	26	39
42.4	48	51	49	40	27	34
45.4	49	45	47	44	15	41
40.5	37	45	49	33	33	34
52.5	48	54	57	49	15	47
51.7	50	59	45	48	26	46
43.2	40	44	54	40	23	37
57.7	64	68	55	39	25	52
43.3	53	51	43	35	26	37
60.1	57	65	80	30	14	54
50.6	53	59	57	23	22	43
49.0	45	44	51	40	16	47
37.7	27	38	45	31	18	33
49.6	53	49	44	33	11	48

DIRECT OBSERVATIONAL EXPERIENCE
EDUCATION 32 - THE SCHOOL IN AMERICAN CULTURE, TEACHER 2
(N = 41)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
30.9	49	55	46	39	16	47
36.6	60	68	55	41	20	50
38.9	37	49	38	39	30	31
47.5	51	49	40	27	23	46
45.9	40	49	58	40	15	39
45.9	49	59	47	33	24	38
43.2	31	46	49	32	22	38
34.4	49	63	43	50	21	49
39.0	37	45	44	35	25	32
46.3	47	48	51	42	24	41
45.3	39	45	38	28	22	44
33.8	41	42	38	40	19	25
46.8	42	51	49	33	26	42
47.7	32	51	47	40	25	43
32.2	53	63	40	38	20	45
30.9	37	34	60	40	24	45
53.1	36	58	36	23	19	53
38.3	39	49	44	48	25	28
30.5	36	49	55	31	25	48
43.6	45	42	36	32	12	39
38.0	39	62	31	41	27	55
31.6	30	66	57	34	20	43
49.3	46	59	49	43	25	42
53.5	55	63	51	35	28	48
34.7	30	56	39	39	20	54
49.8	60	55	46	41	19	45
45.6	40	54	41	27	27	41
38.9	62	68	64	43	28	52
42.8	38	42	58	36	26	37
53.8	49	66	46	46	21	47
43.9	34	54	46	39	13	36
53.5	49	55	51	34	20	51
43.3	30	51	46	58	31	34
34.3	30	60	38	40	23	49
45.8	47	45	58	34	18	41
43.5	44	46	37	36	26	40
48.6	43	63	49	38	24	40
42.7	38	52	51	39	24	34
47.6	44	59	48	29	19	41
34.3	42	46	31	33	24	24
32.8	25	34	34	40	28	27

VICARIOUS EXPERIENCE
EDUCATION 52 - THE SCHOOL IN AMERICAN CULTURE, TEACHER 2
(N = 41)

Y_i	X_1	X_2	X_3	X_4	X_5	X_6
55.1	56	60	51	33	20	52
61.6	62	68	54	43	24	58
48.5	43	48	49	41	24	45
40.6	31	44	38	26	25	37
46.0	50	48	43	40	28	42
58.6	56	63	73	24	19	54
46.2	54	45	49	35	20	43
43.6	46	45	43	33	21	40
41.3	41	51	42	34	22	34
52.3	59	48	49	42	26	51
39.7	40	42	64	27	14	32
42.4	43	42	48	27	26	39
49.8	54	55	63	35	19	43
45.7	54	55	60	33	23	37
57.9	55	66	49	47	21	53
38.9	41	42	38	25	18	35
48.0	46	52	54	40	29	42
26.1	32	38	49	33	12	13
57.8	61	66	60	39	18	52
36.5	46	41	57	29	28	28
39.6	46	41	39	37	6	35
41.1	43	49	46	33	25	34
49.1	50	58	35	38	30	45
52.2	55	58	49	35	26	48
45.0	48	46	45	55	26	39
42.1	44	45	52	42	33	35
43.1	46	48	43	34	25	38
52.1	49	55	56	34	26	48
45.3	50	49	47	39	23	40
42.8	42	42	56	30	18	38
56.9	61	63	64	31	23	52
37.8	35	38	37	42	25	33
52.9	50	63	60	32	20	46
40.5	39	42	45	39	30	35
44.4	43	49	48	25	31	40
32.9	31	42	20	27	23	28
57.2	52	59	46	46	20	55
38.3	42	42	52	23	22	32
55.5	50	62	80	44	18	46
51.6	49	63	47	40	23	45
41.2	45	46	47	41	18	34

DIRECT OBSERVATIONAL EXPERIENCE
EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT, TEACHER 1
(N = 37)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
51.9	50	48	49	37	30	49
57.8	53	59	48	40	24	55
56.5	58	71	52	45	24	48
46.5	48	52	60	38	31	38
47.0	46	46	52	37	15	40
49.8	44	58	49	34	28	41
48.2	52	46	51	41	20	41
48.9	51	52	49	41	27	41
54.8	55	62	54	45	16	47
52.9	51	58	51	40	23	46
46.4	51	42	43	35	28	40
41.6	41	45	57	28	34	32
53.4	51	65	52	40	20	44
46.0	45	49	40	48	24	35
46.6	48	42	52	44	19	39
55.7	57	55	49	43	21	52
48.4	46	55	56	46	26	39
43.9	45	44	39	40	23	33
48.8	47	60	57	44	19	37
45.3	41	51	45	46	28	34
45.9	53	54	57	40	33	36
44.9	48	54	51	39	16	31
48.6	47	52	55	34	32	42
50.5	49	63	54	40	18	39
44.0	50	46	54	37	25	34
51.8	47	63	55	40	15	41
54.4	52	58	68	38	21	50
53.8	57	54	45	33	16	48
48.3	47	49	43	41	24	40
37.0	35	46	51	38	23	20
43.3	41	48	57	29	27	33
44.7	45	54	54	37	22	32
42.4	32	55	58	29	23	28
44.5	38	42	47	41	20	35
44.7	39	51	41	30	26	33
52.2	45	62	49	40	23	43
48.3	41	56	52	29	26	39

VICARIOUS EXPERIENCE
EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT, TEACHER 1
(N = 37)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
48.7	50	49	68	34	17	42
50.5	45	56	52	40	22	42
53.1	57	59	52	41	17	45
44.3	48	49	46	41	27	33
49.8	57	51	46	45	29	43
42.7	40	41	54	37	28	34
50.5	56	60	63	40	19	41
47.7	49	63	78	46	36	38
48.8	55	51	48	35	30	42
57.5	62	68	62	56	22	51
57.8	55	73	54	38	22	50
55.0	53	56	60	42	20	51
45.2	38	45	46	41	32	37
44.8	48	49	54	26	18	34
48.2	48	52	58	41	19	39
51.0	53	58	56	49	22	42
48.0	36	48	49	35	27	41
52.7	54	59	63	47	18	45
55.6	55	68	54	33	22	48
39.8	35	42	44	39	28	27
51.7	44	54	44	39	19	44
47.9	43	63	54	35	29	36
46.8	45	48	56	34	19	38
50.0	48	62	49	46	20	38
47.1	44	45	41	50	21	38
53.2	59	68	57	35	19	43
56.2	59	59	55	51	18	51
46.7	44	42	58	45	27	41
54.0	57	60	49	41	28	48
46.7	46	52	47	31	26	37
54.2	53	59	52	38	21	48
43.9	35	44	41	55	22	32
44.5	44	51	36	27	36	34
55.4	59	59	49	55	26	50
53.5	51	56	52	38	28	49
53.4	50	65	73	48	25	46
52.7	59	54	45	38	24	47

DIRECT OBSERVATIONAL EXPERIENCE
EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT, TEACHER 2

(N = 37)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
41.8	49	49	54	28	24	29
57.8	62	68	54	43	24	52
47.5	45	48	48	28	24	40
49.8	55	45	43	27	17	44
48.8	41	51	55	44	18	40
46.3	45	42	43	41	19	38
49.5	55	56	63	26	17	41
53.2	51	54	56	36	19	48
48.4	48	46	39	39	17	40
47.6	45	46	58	29	20	41
46.4	41	38	29	27	29	41
47.3	44	44	31	36	22	39
49.4	57	44	47	39	21	44
50.3	56	52	64	41	22	44
40.4	47	51	57	34	15	24
50.8	52	42	48	29	21	48
58.5	60	68	55	54	26	53
42.9	40	42	40	33	21	32
47.9	62	45	41	30	23	41
53.0	61	59	56	26	23	47
48.7	48	52	49	28	19	40
55.3	54	78	55	40	26	44
51.7	58	68	52	35	21	40
53.2	57	46	42	40	27	51
43.4	51	48	49	32	19	31
47.3	45	49	64	45	15	38
42.8	33	46	54	40	22	31
41.3	37	41	51	26	18	30
48.7	48	56	52	35	23	39
49.1	44	54	63	41	23	41
52.8	54	63	63	36	16	44
44.1	41	41	44	28	20	35
45.9	47	38	49	23	12	39
43.4	46	42	46	42	28	34
51.4	63	51	47	44	28	46
51.2	53	63	52	31	26	42
41.0	48	45	56	24	16	28

VICARIOUS EXPERIENCE
EDUCATION 151 - HUMAN GROWTH AND DEVELOPMENT, TEACHER 2
(N = 37)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
53.7	53	68	63	53	17	43
45.5	47	49	55	46	23	35
42.6	41	48	43	32	13	28
50.6	51	52	46	38	19	43
46.4	54	49	49	39	18	36
50.6	44	54	56	35	18	43
48.3	45	59	56	37	21	37
53.7	59	78	49	51	27	40
42.8	47	44	42	40	23	31
49.4	50	49	57	31	25	44
47.7	48	45	37	25	19	40
48.3	49	58	37	33	27	37
45.8	49	49	56	31	19	36
44.4	48	46	39	33	20	33
46.3	54	51	46	36	25	36
45.5	54	51	43	33	20	33
59.3	54	58	41	41	20	57
42.0	48	51	49	38	20	27
43.7	39	42	45	37	29	35
40.5	33	44	51	34	19	27
49.2	50	59	57	41	17	38
46.0	44	46	51	26	23	38
48.4	52	51	49	40	30	41
44.4	38	42	43	36	22	35
57.4	55	66	51	37	18	51
52.6	45	65	57	27	16	43
46.3	52	45	46	46	26	38
49.1	47	54	51	35	26	41
58.8	54	68	60	47	23	54
47.6	49	51	49	40	27	39
39.2	49	42	46	37	33	27
54.4	54	56	51	39	25	50
46.0	49	54	45	40	18	33
53.0	50	71	56	32	34	44
48.5	45	49	35	35	23	40
51.7	49	62	52	39	33	44
45.7	42	46	55	32	21	37

DIRECT OBSERVATIONAL EXPERIENCE
EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE, TEACHER 1
(N = 39)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
44.6	36	46	56	41	32	38
54.3	49	68	57	40	24	47
41.0	46	45	46	48	30	30
60.9	60	66	80	59	21	54
53.7	57	59	73	44	24	46
47.3	45	51	57	30	27	42
58.1	59	68	54	54	13	50
50.6	54	54	55	51	28	45
54.7	54	63	78	39	32	49
52.2	49	58	43	36	19	49
48.6	46	54	47	42	26	43
49.4	56	54	54	45	32	45
46.9	46	42	52	44	19	41
45.2	46	51	52	37	25	36
44.6	33	49	44	31	18	36
45.3	53	55	46	47	26	34
48.6	47	58	47	49	27	40
50.5	39	49	68	30	21	46
44.6	46	52	46	41	23	34
51.1	52	44	49	58	17	47
46.0	39	45	56	26	19	40
49.1	50	52	45	43	25	45
50.8	52	54	56	54	26	44
49.2	39	55	47	37	18	42
44.1	37	38	48	39	21	39
46.6	48	52	49	32	21	39
56.8	50	68	54	46	20	51
48.1	53	55	38	38	26	44
50.9	48	58	55	43	22	43
48.6	49	45	55	51	20	42
43.0	39	46	52	29	28	36
56.7	52	59	49	60	19	53
55.2	49	62	55	60	25	49
41.1	43	48	38	40	30	32
45.0	46	55	40	29	20	36
47.0	55	52	56	49	26	37
50.1	60	62	55	33	19	40
46.6	48	52	63	48	24	34
47.4	47	51	47	44	28	42

VICARIOUS EXPERIENCE
EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE, TEACHER 1
(N = 39)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
36.7	31	38	31	26	19	27
38.6	40	41	42	31	23	28
58.1	57	65	68	53	25	53
39.4	45	44	39	32	26	30
48.8	50	55	55	30	30	45
51.0	40	60	54	35	22	44
59.9	59	68	58	69	29	56
48.0	43	51	49	43	25	42
42.8	43	45	58	34	26	33
44.4	48	51	44	29	24	37
46.7	45	54	49	40	30	40
46.8	46	46	52	35	20	41
47.1	52	44	60	35	6	36
50.7	50	63	46	37	33	47
49.9	48	56	56	46	25	42
50.5	50	56	60	32	30	47
44.8	40	49	51	44	22	34
44.0	43	44	51	37	25	37
47.2	49	52	38	28	28	46
43.1	45	54	49	39	28	31
44.8	47	45	60	38	30	38
50.8	58	54	35	39	14	47
42.3	43	49	48	40	23	30
41.4	41	46	51	40	24	29
45.3	48	54	52	45	30	35
51.6	44	54	45	54	17	45
49.6	42	58	49	54	24	40
47.3	49	55	49	46	34	41
46.8	48	48	54	40	24	40
47.3	44	56	49	32	22	39
45.4	44	51	38	37	24	39
46.9	46	58	51	46	28	36
54.3	53	65	73	36	16	43
48.0	51	60	46	40	31	41
52.1	54	58	63	32	18	45
45.4	46	54	45	38	24	36
51.1	56	48	60	49	24	47
50.8	48	59	45	48	29	46
45.7	45	48	51	45	24	37

DIRECT OBSERVATIONAL EXPERIENCE
EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE, TEACHER 2
(N = 39)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
43.5	40	44	46	44	21	34
42.5	49	48	56	28	22	31
42.4	38	45	40	40	21	33
51.4	45	63	46	40	27	46
42.9	35	41	35	26	27	42
41.9	40	45	46	42	32	34
53.0	57	58	73	47	15	41
53.4	48	68	63	48	21	41
48.3	58	51	49	47	22	41
42.6	40	42	49	40	21	33
50.2	46	45	58	52	15	43
55.2	62	55	49	58	22	53
51.0	59	55	46	42	11	43
49.5	45	58	36	49	20	42
47.0	43	44	55	43	22	41
59.9	54	78	60	44	25	54
49.8	49	58	56	54	30	41
39.6	40	35	39	30	22	34
47.3	43	54	47	26	9	37
55.9	60	62	73	44	17	47
50.3	51	52	48	49	22	45
49.3	62	49	46	59	23	43
57.0	60	59	55	51	18	54
51.5	50	54	46	42	29	51
54.0	56	63	50	44	22	40
51.7	62	52	49	48	21	48
44.8	54	51	45	40	28	37
52.8	57	59	45	51	23	48
51.9	54	55	54	39	28	50
45.5	53	46	44	31	22	41
50.9	53	55	51	42	29	48
51.4	52	56	57	50	29	46
47.0	32	52	57	44	24	37
43.2	42	45	34	29	12	35
55.1	58	71	46	46	34	52
51.5	47	62	49	54	23	42
50.1	54	62	49	44	21	40
47.2	44	42	46	59	27	43
50.4	56	51	64	59	21	40

VICARIOUS EXPERIENCE
EDUCATION 222 - EDUCATIONAL EVALUATION AND GUIDANCE, TEACHER 2
(N = 39)

Y_1	X_1	X_2	X_3	X_4	X_5	X_6
44.9	45	46	46	40	18	36
51.6	61	60	54	32	30	49
58.4	56	68	54	53	19	53
47.5	44	45	46	44	21	43
50.7	46	59	49	56	28	43
42.8	41	46	54	33	27	34
45.5	44	51	39	44	30	40
41.4	45	55	44	37	31	29
45.3	52	58	54	45	28	32
54.5	54	58	49	51	24	52
50.6	54	56	46	46	23	45
50.7	52	59	49	47	23	43
40.1	53	39	48	26	11	28
54.8	56	60	64	38	24	47
54.4	58	68	47	44	28	50
52.6	61	65	51	33	32	50
63.1	60	80	57	50	22	59
56.0	57	55	57	58	24	54
50.3	50	56	46	41	19	44
43.5	41	45	56	29	20	34
50.4	44	54	51	37	25	47
47.6	51	51	60	41	24	39
39.0	64	80	38	46	27	36
48.4	54	51	44	44	14	40
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
46.4	43	52	51	44	27	38
42.7	40	46	39	39	28	36
44.7	41	55	47	44	26	33
47.0	41	59	37	55	28	37
48.5	50	52	42	40	23	44
41.5	38	41	44	28	20	34
58.3	62	65	45	46	26	60
51.2	52	58	56	41	33	48
50.1	52	45	63	39	20	46
50.9	49	60	60	56	26	40
45.5	40	55	48	48	29	35
44.5	44	45	40	46	19	36
48.6	49	51	57	40	18	40
43.2	51	42	55	25	18	35